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ORIGINAL LECTURES.

SOME OF THE CAUSES OF FAILURE IN OPERATIONS FOR THE CORRECTION OF SQUINT.

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IN order that we may be in a position to advance in the study of the best means of relief for persistent squint, it is first necessary that we should clearly comprehend its nature, as well as the predisposing and exciting causes.

In 1862 Donders gave the first hint at the real causes of convergent and divergent squint. Before that time, however, central lesions of the nervous system, traumatism, and habit were regarded as the most common causes; while sudden fright, and the attempt to imitate a person already affected, were counted occasional causes.

Graefe was quick to apply the optical principle suggested by Donders. Others took up the subject, and in 1864, when Donders wrote his great work on the anomalies of accommodation and refraction for the New Sydenham Society of London, he presented to the world a clear and wellnigh complete analysis of all the varying forms of squint, demonstrating the causes, both predisposing and exciting, and showing wherein Dieffenbach's already universally adopted tenotomy had not been attended with that degree of success necessary to establish it as a universally justifiable surgical procedure. What Graefe regarded as lost physiological sensibility through psychical exclusion, Mooren had already correctly interpreted as deficient refraction. Strangely enough, however, Mooren did not establish the relations which abnormal refracting power sustains to the accommodative function.

Alfred Graefe, as early as 1858, reported cases wherein the conditions of accommodation were recognized as tending to cause a deviation of the right eye; yet, farther on in his paper, he makes the strange announcement that the squint,

though coexistent and intimately connected with the deficient accommodative power, was completely independent of the existing state of the accommodation.

We may say that all cases of persistent squint are independent of the existing state of accommodation, because, the squint being already established, the eyes must continue the exercise of an amount of accommodative power sufficient to compensate for the error of refraction as far as possible.

To be more plain, the world now recognizes in all cases of squint, whether convergent, divergent, sursumvergent, or deorsumvergent, a certain relation to the acuity of vision, depending upon irreconcilable obstacles to the harmonious fixing of the two eyes upon a single object.

The focusing power and the accommodative power are not the same; yet they are intimately associated with each other, and any disturbance in their normal relations may create the predisposing cause of some form of squint. Active accommodation implies the power of harmonious convergence of the optical axes of the two eyes, and a normal power of fixation. The fixing power will depend mainly upon the state of the perception, while the converging power will depend upon the normal state of the recti muscles, and this state, in turn, of course is dependent upon normal nerve- and blood-supply, as well as constitutional vigor. Central nerve-lesions may, by disturbing motor branches, create spasm in the muscle, or *paresis*; the pressure of morbid growths may exercise a similar power; impairment of the power of perception in the retina, or of the power of transmission in the optic nerve, or of the sensorium, will prevent fixation of the eye upon an object, and thus tend to produce squint. Opacities of the cornea, occlusion of the pupil, or displacements of the pupil, opacities of the lens or its capsule, diseases of the vitreous humor, all tend to predispose the eye to squint.

It is easily understood, therefore, why in many cases tenotomy cannot be relied upon as a remedy for squint. I have long been impressed with the difficulties attending this means of correcting squint, and I am persuaded that the first step in all cases should be directed toward the correction of errors of refraction,—first to

the acuity of vision, and subsequently to the inharmonious muscular action.

If the subject of squint have hypermetropia, which means insufficient power of refraction in the eyes, it will be observed at first that the subject, on looking at near objects, approaches too closely, and develops a squint by overtaking the converging power of the eyes, and the squinting at first will be observed to come on with general cerebral excitement, followed in most cases by severe headache and general neurotic phenomena. If the subject have no organic defect other than the insufficient power of refraction, the squint may be corrected by suspending the patient's accommodative power and correcting the error of refraction. If organic change of structure has already occurred in the recti muscles, this must be corrected by tenotomy carefully done, the error of refraction being at the same time overcome by the use of suitable glasses. I have many times observed in young persons a perfectly satisfactory tenotomy accompanied by the use of lenses to correct the error of refraction mislead the patient, who, for a time having regained a vigorous accommodative power, laid the glasses aside, and gradually the eye having the least acuity of perception deviated outward.

Dr. Hermann Scheffler and Dr. Giraud-Teulon have demonstrated clearly the importance of muscular co-ordination of the eyes which have not nearly or exactly equal perceptive power. Since the acuity of perception always depends upon normal refraction, we must understand that eyes naturally endowed with normal perception may, in those who have congenital errors of refraction, never both be called into activity at the same time, and, by habitual use of one eye, the perception of the unused eye gradually fades as the child grows, and after mature growth of the individual this can never be regained. It is, therefore, obviously important to correct squint as soon as possible after it has become manifest.

The tendency to squinting is often observed for weeks and sometimes months before the deformity is established. During this period little or no excuse may, in the present state of our knowledge, be allowed for neglecting to determine the refraction of the eyes. The aversion to spectacles cannot weigh against the dangers to physical comfort of a person deprived of the use

of one eye, with the horrible countenance which squinting produces.

Many a child, the subject of some trivial error of refraction, has been denied the opportunity of educational qualifications for a brilliant and useful career in life because ignorant parents and equally ignorant family-physicians have said, "This child, whose nervous system is abnormally excited, and who suffers headaches, and who at times exhibits vertigo with nausea after prolonged attempts at study, must not be permitted to continue his studies: the brain is over-sensitive, the blood-vessels supplying the outer structures of the eye are flushed; there is danger of brain-disease. Further attendance at school must not be permitted."

This state permitted to go uncorrected, however, will, when the child grows older, if the mind be active, lead in many cases to spasm at first, and subsequently to structural changes in one or more recti muscles; and this is squint.

Now, five minutes' attention to the state of refraction in the eyes will disclose the cause of all these disturbances. Suspend the accommodative power, and a test of refraction not only determines the necessity for the glasses, but at the same time reveals the character of glasses necessary.

With the involuntary accommodation of the emmetropic eye no cerebral excitement beyond that which accompanies the idea suggested by what the eye sees will occur. In all cases of defective refraction there must be added to the normal accommodative power a certain tension of mind in the attempt to see with sufficient clearness to trace the object in view. This antagonizes the power of thought, retards the consentaneous exercise of the faculties of reason, and one eye is sacrificed in the attempt to see where great strain is required to maintain fixation of the eyes upon the object. On the other hand, persons who have but one eye gradually become educated into the habit of dispensing with that power of the mind which discriminates angles, distances, and comparative size of objects. It robs the mind of its best faculty in all logical processes of thought. Children educated in the use of one eye must have remarkable intellectual endowments to enable them to acquire any profound degree of original reasoning power.

Claudius Ptolemy's first book on astronomy was devoted to an explanation of the causes and uses of single vision with two eyes. In all accurate visual exercise there must be constantly present before the mind a single point in the projected field, and this necessarily depends on the position of the eyes and the direction of the visual line. In eyes having defective refracting power, the projected point of the field of vision must correspond to identical points in the retinae of the two eyes. If the image is not formed in identical portions of the retinae, the two eyes cannot see singly, and it is a strain upon the mind, as well as the eye, to overcome the confusion which this condition produces. Whatever may be said concerning the influence of constitutional diseases or of traumatism in the development of squint, this mental strain necessary under the attempted exclusion of inharmonious images so irritates the sensorium as at times to disturb and limit the powers of thought. All errors of refraction do not lead to squint, however, nor even to the formation of images in abnormal portions of the retinae; but they do lead to the necessity for abnormal intensity of mental processes, and bring on headaches with the accompanying depression of spirits, disturb sleep, impair the appetite, producing malnutrition, which, when fully established, constitute the sum of that group of neurotic phenomena now described as neurasthenia. With this foundation drawn from actual observation, do you wonder that merely surgical procedures often fail to produce permanent correction of the squinting eye?

In the haste to dispatch the business in hand, to say nothing of the obliging disposition one feels towards the other patients who are waiting in the reception-room, is it surprising that one should at times neglect some important detail in the preliminary examination of the eyes of the patient who has come for the radical cure of squint? A little introspection may be as useful for the doctor as it is wholesome to the Christian. The study of the causes of failure may lead to their elimination, and thus broaden our sphere of usefulness. I find it convenient to make frequent reference to the little case-books in which I have carefully kept the record of all cases of errors of refraction which I have attempted to correct. This often serves

to point the way in searching for the cause of failure.

Soelberg Wells expressed a glowing truth in the statement that the first effects of an operation for the correction of squint are seldom permanent. A little inquiry as to the reason for this robs ocular tenotomy of all its simplicity and consigns it to a place high in the list of the more grave and serious operations in surgery. True, any mere tyro may cut a tendon, and cut it well; but it takes an ophthalmic surgeon well trained in the study of the anomalies of refraction and accommodation to estimate the character of a tenotomy which shall permanently establish the necessary conditions for the exercise of binocular vision. I am persuaded that tenotomy unaccompanied by correction of existing errors of refraction should never be done in persons under thirty years of age, and then only in such as have lost the sight in one eye. To correct the squinting of a blind eye is, in fact, a very simple proceeding; but where it concerns the establishment of an harmonious exercise of the visual power of both eyes it is a serious business, and should always be done with deliberation. The mechanical devices are not numerous, nor difficult to apply, provided always the optical properties of the eye are first inquired into.

To recapitulate briefly: Failures in attempts to correct squinting are to be attributed to neglect on the part of the surgeon to rectify at the same time deficiencies in the refractive and accommodative powers of the eye; neglect of the patient to observe the rules laid down for this purpose; and, more rarely perhaps, to bungling and unskilful execution of the tenotomy. It is a great mistake to suppose the eye operated upon for the correction of squint should be excluded from the light or bound up as one would bind a breach of continuity in the skin, and it is a mistake of greater import still to permit such exercise of the visual power as attempting to see near objects.

With the newly-discovered anæsthetic, cocaine, general anæsthesia is no longer to be thought of in operating on strabismus. The operation being done with as small an opening in the conjunctiva as will conveniently admit the points of the scissors, the eyes should at once be bathed in cold water, which always proves grateful to the sensibilities of the patient, and

the glasses, which have been previously devised for the correction of the error of refraction in each eye separately, should then be put on, to be removed at such intervals as may be desirable for bathing the eyes to soothe the irritation from the wounds. The accommodative power should be kept suspended by the use of a mild mydriatic just sufficient for that purpose until complete recovery from the operation.

It will be found that few persons indeed are able to make regular and continuous use of the eyes within a month after such an operation: it should in all cases be allowed, not only for the firm attachment of the cut tendon to its new position upon the surface of the eyeball, but for the complete absorption of the provisional callus or plastic effusion which nature provides for the cementing of the cut tendon to the scleral surface. If the eyes be used too early, permanent impairment of muscular function may be developed thereby, and the result of an otherwise perfect operation materially altered. All eyes that tend to squint should be treated upon the first discovery of the defect. In this way many may be corrected without operation. After the squint is confirmed, operative procedures should not be delayed, because the unused eye of a child always loses acuity of perception from the lack of use or natural exercise of the vision. Slight impairment of the perceptive function may, if treated before the mature growth of the individual, be in a great measure corrected; but the dimness of sight due to lack of use in an eye that squints can, in an adult, rarely be improved and never wholly overcome. It is hardly necessary to say that the tendons should always be divided close upon the surface of the sclerotic. The scissors with which this may be done should have thin and narrow blades, the points being so smoothly rounded as to prevent pricking or wounding of any of the structures with which they may incidentally be brought into contact. The hook used for lifting the muscle should be small and of delicate pattern. It should be angular, rather than curved. Finally, the patient should be cautioned not to exercise the muscles of the eyes for the amusement of inquisitive people, nor to encourage comments about the apparent results of an operation, before complete recovery is established.

ORIGINAL COMMUNICATIONS.

REPORT ON RECENT PROGRESS IN THERAPEUTICS.

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COCAINE.

GAEDEKE, in 1855, isolated an alkaloid from the leaves of *erythroxylon coca*, which he named *erythroxylina*. Niemann, a pupil of Wöhler, further studied this substance in 1859, and gave it the name of *cocaina*. Prof. Schroff subsequently found that this alkaloid possessed to an unusual degree a benumbing effect when applied to the tongue, the spot remaining for a time anæsthetic, and he reported this fact to the Vienna Medical Society in 1862. From the communication made to the same Society last year by Dr. Karl Koller, Assistant Physician to the General Hospital in Vienna, the applicability of this new agent, especially to ophthalmic surgery, in many operations in which a local is preferable to a general anæsthetic, was announced, and supported by reports of experiments upon human beings as well as upon the lower animals. Previous to Koller's paper it had been known that this drug contracted the peripheral arteries, and that it dilated the pupil both through the circulation and by its local action. In a paper by Dr. Van Anrep,* published in 1880, a number of physiological experiments are reported, and the suggestion was made at the conclusion that its local anæsthetic action might become of importance. Koller, in his original paper, also acknowledges in complimentary terms the compilation of Dr. Sigmund Freud, read before the Vienna Society a few months previously.

After the publication of Koller's paper general interest was attracted towards this new agent, and it was put to manifold uses, to some of which it was manifestly unsuited. The author of the paper just referred to was content with recommending cocaine muriate therapeutically in two directions: (1) as a narcotic in painful affections of the eye, and (2) as an anæsthetic in operations on the eye. The internal administration of the drug was

* Pfleger's Archiv f. d. ges. Physiol., Bd. 21. Quoted by Knapp, monograph on "Cocaine."

referred to, but dismissed with the statement that it had been abandoned. In fact, internally it appears to possess no advantage over other agents, or, in truth, a good preparation of coca leaves, excepting perhaps certain cases of neuralgic or gouty pain in the stomach.

An application mentioned by Koller, but not original with him, was the remarkable control which it had been shown to have over the sensibility of the mucous membrane of the mouth, pharynx, and larynx. This effect is more decided, as a rule, than the insensibility produced by the bromides, and it has in consequence also found a wide field of usefulness in laryngoscopy and in operations upon the pharynx and larynx.

Dr. H. M. Biggs, of New York, published in the *Journal of the American Medical Association* a valuable article upon the physiological action of cocaine, which is founded on a series of experiments conducted by the author in the physiological laboratory at Berlin. Twenty-one experiments are minutely described, and carefully prepared tables are added. The writer summarizes the results of his experiments thus: "In conclusion, then, the action of cocaine on the frog may be summed up as follows: 1. It has a powerful local anæsthetic action on the skin, the mucous membrane, and the eye. It usually produces mydriasis. 2. It has a depressant action on the heart, reduces the force and frequency of its pulsations, and finally paralyzes it (first the ventricles and then the auricles) in diastole. 3. In small doses it at first slightly increases the number of the respirations, then decreases it, and in large doses diminishes it rapidly from the first, finally causing death from a paralysis of respiration. 4. It at first slightly heightens and then gradually depresses the reflex action of the spinal cord in small doses; large doses depress from the first. 5. Small doses at first slightly increase the irritability of the sensory nerves, then depress their irritability, and large doses depress from the first. 6. Both large and small (not very small) doses have a depressant action on the motor nerves. 7. It paralyzes the pneumogastric nerves. 8. Doses of moderate size diminish the excitability of the striated muscles. 9. The local application of cocaine to any of the more highly constituted organs or tissues causes a temporary cessation of

their functional activity. 10. From the local and constitutional action on the different organs and tissues, it is rendered probable that its general action is a local one, exercised on all parts for which it has a chemical affinity, through its presence in the blood. The results of these experiments would seem to indicate the use of cocaine in tetanus and strychnine-poisoning." These conclusions agree in substance with the results of clinical studies upon the action of the drug, made by Prof. J. M. Da Costa, and reported to the College of Physicians of Philadelphia.

The literature of cocaine has become already quite extensive, and Dr. Knapp has rendered a service to the profession in collating into a monograph a number of papers upon the subject, including many interesting investigations and observations made by himself.

In addition to the various uses to which cocaine has been found applicable in eye-practice and in operations upon the throat, it has been used with advantage in painful affections of the ear, and as an anæsthetic for operations upon the auricle, canal, or tympanic membrane, as well as in catheterization of the Eustachian tube. In tinnitus aurium Knapp did not obtain any useful result from its application. In neuralgia and inflammatory earache the instillation of a few drops of a four-per-cent. solution gave immediate and complete relief. In toothache its curative effects are prompt and decided when directly introduced into the cavity. In facial neuralgia a solution of the alkaloid cocaine (twenty per cent.) in oleic acid has been applied with remarkably good effects. Its hypodermic employment over the supra-orbital nerve (four-per-cent. watery solution of cocaine muriate) has also given relief.

For the removal of small growths, where a local anæsthetic is needed, a hypodermic injection near the site of the tumor will enable the surgeon to remove it without pain. This may also be utilized in removing needles from the hands; also in minor operations, such as that for ingrown nail, and where it is desired to apply a caustic agent.

In the surgery of the nasal passages cocaine has been of great service in enabling the surgeon to remove hypertrophies, apply the galvano-cautery, etc., without discomfort. The insufflation of five-per-cent.

solution has also given great relief in certain cases of hyperæsthesia of the nasal mucous membrane accompanying hay-fever or coryza.

In extensive tubercular ulceration of the larynx, with dysphagia and odynphagia, the application of a strong (ten to twenty per cent.) solution will often enable a patient to eat a meal in comparative comfort.

The value of cocaine in laryngeal surgery is unsettled. Some cases have been reported in which the use of strong solutions facilitated the removal of growths, while in others it completely failed. Bosworth has used the agent in the form of a spray for spasmodic cough attending bronchitis with satisfactory results. He used a Delano hand-atomizer with a two-per-cent. solution.

In general surgery the use of cocaine finds but limited employment, on account of the few operations in which local anæsthesia is required. In the case of the distinguished patient in New York, suffering with pharyngeal cancer, whose sickness and recent death moved the world to sympathy, it demonstrated its usefulness in relieving pain of malignant disease. In operations involving nerve-trunks, or on mucous membranes such as the interior of the mouth or the rectum, cocaine has found a place, as well as in operations upon the genital organs (cutting strictures in the pendulous portion, overcoming spasm, the introduction of instruments into very sensitive urethræ, cauterizing venereal sores, etc.).

With regard to the dangers of cocaine, it may be almost said, as of the snakes in Ireland, "there are none." It causes mydriasis, but never to the maximum, and the effect passes off again in a few minutes. Slight dizziness or nausea has been also mentioned, but it may be easily relieved by inhaling nitrite of amyl or by a hypodermic injection of morphine. In some operations upon the eye there appeared to be more bleeding after its use than usual, and some unfavorable results have been reported by Dr. P. D. Keyser after operations for cataract: possibly such accidents may be attributable to some impurity of the drug or to the presence of bacteria in the solution used.

The fact that cocaine has been reduced in price, so that it can be purchased at retail at from ten to twenty cents a grain,

warrants its more frequent use than when it was only a therapeutical curiosity at several thousand dollars per pound.

ABSINTHINE.

An ancient remedy of some repute, wormwood has almost entirely dropped out of modern therapeutics, although still used sometimes in domestic practice in infusion as a tonic, emmenagogue, or anthelmintic.

Of late years, attention has been frequently directed to the peculiar phenomena produced by the abuse of absinthe in the human organism, and its toxic effects are now generally admitted. It is true that these fatal results have been attributed to the large quantity of alcohol consumed, rather than to the presence of absinthe; but it has also been shown that the phenomena are essentially distinct from those produced by an abuse of the other forms of alcoholic liquors.

The question, however, appears definitely settled by the labors of Dujardin-Beaumetz. It is now generally acknowledged that the essence of absinthe is a dangerous agent, and that the volatile oil or essence of absinthe distinguishes itself from other active principles by the property of producing an intoxication characterized by epileptiform seizures. One of the active principles is therefore toxic; the other, the bitter principle, it is claimed has no toxic properties, and, on the contrary, may in certain cases be a remedy of very great utility. Dr. Roux, in a systematic paper on this subject (*Bulletin Générale de Thérapeutique*, tome cvii., 1884, p. 438), reports a number of clinical cases in which the agent was used, and concludes that this bitter principle should be utilized. He found that,—

1. The absinthine obtained by the process of Duquesnel—the bitter principle of absinthe—is not toxic.

2. Absinthine is a medicament useful in chloro-anæmia, and in convalescence from grave diseases which have altered the digestive power without lesion of the digestive tube.

3. Absinthine is especially useful where, with anorexia, there exists constipation more or less obstinate.

4. The most suitable dose is ten centigrammes, ten minutes after a meal, twice daily; or it might be given in pills before each meal.

ANTIPYRINE AND KAIRINE.

Although the composition of antipyrine is kept secret for commercial purposes, and has been for evident reasons prevented from coming into general use, the clinical experiments that have been made with it have established for it a reputation as an antipyretic which justifies its title. It was first prepared by Dr. Knorr, of Erlangen, and introduced by Dr. Filehne as a febrifuge. Especially in the hyperpyrexia of typhoid does this agent act with promptness and efficiency; in erysipelas and rheumatism it is less certain in its results. In doses of ten or fifteen grains every hour until five or six have been taken, or in single doses of from fifteen to thirty grains, it usually quickly reduces the fever-temperature, with its rapid pulse and respiration. It does not act ordinarily by producing diaphoresis; although this result has been noticed, in many cases it is absent. The only objection appears to be that it is rejected by the stomach in some patients, and in others, although the perspiration may not be profuse, yet there is considerable depression of the bodily powers.

Kairine, an agent which in its composition is probably closely related to antipyrine, has been introduced by Dr. Filehne, and is used by him in cases similar to those in which antipyrine is used, as a substitute for it, in ten-grain doses, repeated if necessary as in the other cases.

Antipyrine and kairine have been used in combination by Dr. G. Mangazzini, who reports that the temperature was reduced more quickly than by either alone. Where high temperature is maintained by some condition of the bowel which is attended by irritation, the bowels might be cleansed, and paregoric administered in first typhoid elevations of temperature, preparatory to the administration of the antipyrine.

[At the German Hospital antipyrine has been used, and the results claimed for it fully confirmed. Single doses of fifteen to twenty grains were usually well borne by the patient, and the effect upon the temperature-record was very obvious. Some cases, which were unable to take the remedy because it was at once rejected from the stomach, afterwards obtained good results from its administration by the rectum as a suppository containing thirty grains. The rectal administration of antipyretic agents is a method which has been too much neglected. If remedies can be given by

the bowel, and the stomach reserved for its digestive functions, it offers a distinct advantage in many cases. It was found that antipyrine was most useful in breaking up a habit of high temperature in the third week of typhoid, and in relapses. No eruption or other bad results from its use were observed, except that in a few cases it simply could not be retained in the stomach.]

ADMINISTRATION OF ALCOHOLIC AND OTHER STIMULANTS.

In another column is a paper calling attention to a very important subject, involving a question of responsibility on the part of the profession for the prevalent abuse of alcohol by the laity. The arguments advanced in favor of administering dilute alcohol instead of whiskey or brandy are forcible and convincing. The desirability of prescribing pure, unadulterated drugs wherever possible, the well-known variation in strength of commercial spirituous liquors, and the comparative cheapness and convenience of substituting for them a stimulant containing a known proportion of pure ethylic alcohol, are discussed in the paper read before the College of Physicians by Dr. Leffmann. There are many arguments in favor of and no valid ones against this method of the medical employment of alcohol, the availability and efficiency of which have been proved by several hospitals and public institutions which have adopted it. At the German Hospital, during the term of the reporter this summer, cases of pneumonia, phthisis, and typhoid fever took alcohol (diluted one-half with mint-water and a little glycerin)—in short, wherever an alcoholic stimulant was needed—without objection and with satisfactory result.

The method deserves to be generally adopted in hospitals where accuracy of dosage and efficiency are desired, which in this instance are also favored by cheapness. There is no need, under such circumstances, of allowing the patient to be aware that he is taking alcohol or an alcoholic stimulant and thus be provided with an excuse for future indulgences.

A recent writer in the *Therapeutic Gazette*, Dr. J. B. Burroughs, of New York, recommends the substitution of nitro-glycerin for alcohol in some cases requiring prompt stimulation, and reports a case of poisoning by laudanum in which hypodermic injections of atropine were supple-

mented with the inhalation of glonoine with remarkably good effect. He says that hardly a day passes in which he does not use it in cases where brandy might be given. He claims—1, that one or two drops of a one-per-cent. solution are equal to an ounce or more of brandy; 2, it is tasteless, colorless, and nearly odorless; 3, its effects are rapid; and, 4, its greatest advantage is that there is no danger of creating an appetite for stimulants.

It should be remembered that alcohol is often administered in cases where it is unsuitable, as in sunstroke, where another form of diffusible stimulant, such as ammonia or tincture of capsicum, would be far better. In some cases of stupor (alcoholic, hysterical, etc.) the use of an enema containing a drachm of tincture of capsicum with a small quantity of water has been followed by prompt, even brilliant, results.

A CASE OF ENDOMETRITIS EXFOLIATIVA.

BY W. THORNTON PARKER, M.D.

AS membranous dysmenorrhœa is by no means common, the following case may prove interesting: it will at least remind us of the conflicting statements of our teachers concerning the pathology of this disease.

Mary H., a married woman, with two children living, the youngest three years old, has had a history of dysmenorrhœa, and has repeatedly passed shreds, and once before a cast of the womb. Sickness commenced with pains in and about the hips and abdomen, increasing severely with the menstrual discharge. They became at last so severe that she "suffered as if in labor." Hot cloths and various home remedies were applied until something came away, and, hemorrhage continuing, I was sent for.

I found my patient still in pain and flowing quite freely, and, upon making examination of the contents of the uterus expelled, I found it to be a complete triangular cast or sac of the uterus. The patient received opiates at once, sufficient to control the pain, and a moderate amount of ergot was administered during the succeeding twenty-four hours. The vagina was plugged for a short time with absorbent cotton wet with a weak solution of tincture of iron; but this was soon removed, the hemorrhage steadily subsiding. The cervix was neither plugged nor dilated, the specimen being sufficient evidence that the organ was empty. The patient continued to

improve under generous diet, malt, and dialyzed iron.

The case was afterwards diagnosticated as chronic corporeal endometritis, complicated for years with exfoliative dysmenorrhœa. A chronic leucorrhœa yielded slowly to treatment with hot vaginal injections and Mitchell's suppositories containing sulpho-carbolate of zinc. No shreds or casts were passed within a year after this sickness, but a general improvement in health went on without interruption.

The specimen fully proved itself to be a "dysmenorrhœal membrane" or exfoliation from endometritis. There *had been no sexual intercourse* since the last menstruation, and, indeed, for some time previous to that date. The patient had no reason to consider herself pregnant, and a similar cast had been passed before marriage. No suspicion of sexual intercourse previous to marriage could be reasonably entertained.

The case, then, may be either one of membranous dysmenorrhœa or of an exfoliation the result of endometritis. Which is it? In view of the fact that so much difference of opinion exists on this subject among authorities, it may be worth while to quote from some recent writings. I have been particularly impressed by a paper of Dr. Beigel's, which seems to agree with the history of the case under consideration.

The case interested me especially at the time, because some of my older professional brethren, without examining the specimen, considered me to be laboring under a mistake and discovering in the simple products of an abortion a case (to them very rare) of membranous dysmenorrhœa. The fact that the woman was married and had children living made my claim, to them, an absurdity, and I was conscious of having lost considerable of their respect by error in diagnosis and my persistency in adhering to my opinions. One went so far as to warn me that should I, after all, at some future time run across a true "dysmenorrhœal membrane" in an unmarried woman, I need not be willing to risk too much on the reputation of my patient for chastity. Finally, to complete my disappointment, the specimen itself was lost on the way to Prof. Thomas.

Dr. Beigel concludes from the result of his examination as follows:

"1. That the so-called dysmenorrhœa membrane occurs in consequence of primary or secondary disease of the uterine mucous membrane,—*endometritis*.

"2. The characteristics of this disease consist in a pathological change of the mucous membrane, whereby, in consequence of well-marked proliferation from beneath, the membrane is shed in large shreds or as a continuous sac.

"3. The expulsion of this, as a rule, occurs through contractions of the uterus after preceding hemorrhage, menstrual or otherwise, whereby closure of the os internum by the membrane leads to retention of blood and the production of intense pain.

"4. As menstruation plays a secondary part in the development of this affection, and the formation of the membrane is in no way connected with conception or abortion, it seems better to give up the terms 'dysmenorrhœa membranacea' and menstrual decidua, and adopt the denomination 'endometritis exfoliativa.'

"5. The microscopic examination of the membrane does not furnish similar results. In one class of cases we find the normal elements of the mucous membrane merely pathologically increased; in another series the individual elements of this, as the glands or epithelium, are lost or in a state of degeneration; in a third class embryonal cellular tissue is formed; and in a fourth epithelium plates or cells, which are very similar to these, alone or in conjunction with the embryonal tissue of the skin-elements of the membrane.

"6. In all cases it forms a marked cellular production, constituted of free cells, which form the definite occasion of the loosening of the mucous membrane from its attachment.

"7. The pathological changes of the uterine mucous membrane in *endometritis exfoliativa* appear to be such that the development of an impregnated ovum in the uterine cavity cannot take place: therefore the patients, as long as they are under the influence of the disease, are sterile."*

Membranous dysmenorrhœa, as it is called, is considered by Hausmann and others to be an "imperfect conception;" but these writers admit that it is always connected with some *morbid process*. Barnes believes that this affection is uncommon in single women,—i.e., virgins,—and hence arrives at the opinion that it must be associated with either sexual intercourse or an imperfect conception. Haus-

mann also claims that this process is never associated with *maidens*, and that it is *always* the result of sexual intercourse.

At a meeting of the Obstetrical Society of New York, March 17, 1874, Prof. Thomas presented a specimen of a complete dysmenorrhœal membrane. He reported that every third month the patient passed a similar membrane, and shreds every month. The patient was a married woman, but had never been pregnant.

At a meeting of the Obstetrical Society of London, Prof. Barnes reported the case of a lady medical student, who brought to him a specimen of dysmenorrhœal membrane she had passed herself. She denied ever having had sexual intercourse.

I believe three cases were reported in the *American Journal of Obstetrics*, but the dates have been lost, and I copy the notes as I made them in my *index rerum* six or seven years ago.

The following quotations from Tanner and Leishman may be instructive in this study:

"When we examine with a quarter-inch object-glass the normal catamenial fluid, it will generally be seen to contain a considerable quantity of epithelial debris, showing thereby that the healthy mucous membrane lining the uterus has a periodical tendency to shed its superficial cells. The uterine mucous membrane becomes congested and swollen, I believe, in most women, at each monthly period. But in some forms of dysmenorrhœa it gets more hypertrophied, and then, being exfoliated, is expelled, with *distressing bearing-down* pains, in the menstrual discharge. This dysmenorrhœal membrane is generally passed in fragments; but every now and then it comes away whole, forming a complete triangular-shaped cast of the entire uterine cavity. It is rough externally, having a cribriform appearance produced by the pores of the utricular follicles or glands; while internally it is smooth and moist. The menstrual decidua is similar in structure with the true decidual covering of the ovum; but it may generally be distinguished from it by the circumstance that it is more flimsy and unsubstantial in character; that it is chiefly made up of layers of flattened or cylindrical epithelium; and that its glanducts are very much smaller."†

* Archiv für Gynaekol., Band iv. Heft I.

† Tanner, p. 260, English edition.

"It must be made clear, however, from the outset, that all solid matters discharged from the uterus are not 'moles,' properly so called. In other words, all such discharges are not the result of impregnation,—a fact which is of obvious medico-legal importance, and which imposes upon us the necessity of drawing a careful distinction between 'true and false moles.'"

"It is, moreover, much less substantial in its texture and more easily torn than the decidua, which has, under such circumstances, according to Montgomery, 'a soft, rich, pulpy appearance, deep vascular color, and numerous well-developed utricular follicles or crypts and foramina for the reception of the nutrient vessels from the uterus which are always so distinctly observable."

"In one point, however, the dysmenorrhoeal membrane resembles the decidua: having its inner surface smooth and the outer unequal; but it is of a ragged, shreddy appearance, unlike that of the healthy uterine decidua, and is, moreover, entirely destitute of the little cotyledonous sacculi described as an essential character in the latter structure."*

"We cannot, without imminent risk of falling into scientific error and unjust suspicions of the chastity of the patient, admit that any structural character of a membrane cast from the uterus short of the detection in it of *chorion villi* is proof of impregnation."†

Prof. Thomas considers that the pathology of membranous dysmenorrhoea is "not yet known," and, without giving us the benefit of a direct assertion, considers Dr. Oldham's opinion the most rational,—i.e., "that, at some time during the inter-menstrual period, the entire lining membrane of the uterus is lifted from its base and separated, so as to be ready for extrusion at one of the next menstrual crises."‡

Prof. Thomas states that he "cannot attribute it to endometritis, for evidence of the existence of that disease was entirely wanting in *four cases out of five*." It would seem that in one case, then, *positive* endometritis was present.

To illustrate the confusion and uncertainty which exist on the subject, the conflicting reports of Rokitansky and Wedl,

reported by Dr. Mandl, of Vienna, in the *Obstetric Journal*, vol. ii. p. 402, and quoted by Prof. Thomas, may be cited as a remarkable example. Sufficient evidence exists, however, to justify us in refusing to claim that the membrane can *only* be associated with impregnation, and it is evident that many cases have been reported where this membrane has been passed by virgins.

It would certainly be very reckless indeed to claim that "it is just the same thing as an abortion," or that "without sexual intercourse such products are not developed."

It would seem, then, that the diagnosis "endometritis exfoliativa" is not too "far-fetched," and that, after considering the opinions already quoted, such a term may be preferable to the old name of "membranous dysmenorrhoea." That such membranes can be and undoubtedly occasionally are cast forth by virgins who have never been suspected of having had sexual intercourse is admitted by most authorities. The theory that such membranes are *always* an imperfect product of conception, and only where sexual intercourse has taken place, is, it is to be hoped, sufficiently exploded to remain so for all time.

NEWPORT, RHODE ISLAND.

A CASE OF COMPOUND FRACTURE OF THE SKULL.

BY L. D. BROSE, M.D., Ph.D.,
Physician to the Evansville Orphan Asylum.

A. H., æt. 3 years and 4 months, a strong, healthy child, while playing in the street on the afternoon of October 12, 1884, was kicked by a work-horse wearing a heavy, rough, iron shoe. He was picked up wholly unconscious, with bleeding from the seat of injury, and taken to his home near by. I saw the child with Dr. W. D. Babcock about an hour after the accident, and found him still unconscious, with a rapid and feeble pulse and widely-dilated pupils. Beneath the scalp there was much effused blood. Just in advance of the anterior fontanel there was a lacerated wound, but no fracture of the bone beneath. Above the right parietal eminence there was another lacerated wound, and a probe introduced here passed readily into the cranial cavity and revealed a single fracture of the right parietal bone, with much separation of the fragments. Our prognosis was that the child would live but a short while, and no further treatment was indicated save cold cloths to the head and a few drops of brandy.

* Leishman, p. 218 et seq., English edition.

† Edis, *Diseases of Women*, English edition, p. 450.

‡ Thomas, *Diseases of Women*, p. 621 et seq.

Next day the boy had regained consciousness, was able to talk, but had complete paralysis of the left side of the face, and of the left arm and leg. Above each eye there was a bluish ecchymosis, but no subconjunctival hemorrhage. There was fever, with great restlessness and irritability. Ten grains of bromide of potash, every two hours, was ordered, and the cold applications continued. October 14 the paralysis had disappeared from the left leg and the face, but remained in the left arm. He vomited at times; otherwise his general condition remained as on the preceding day. Calomel, in small and repeated doses, was ordered until the bowels were moved. On the 15th and 16th he continued improving, and on the morning of the 17th, although there was still palsy of the left arm, the temperature became normal. October 18 he had a chill, followed by high fever and a very rapid pulse.

It was now decided to make an exploratory incision to liberate retained pus, and to elevate depressed bone if any could be found. With Dr. Babcock's assistance, the opening in the scalp communicating with the fracture was enlarged by an incision carried downward parallel with the fibres of the temporal muscle. Considerable blood was lost on this incision, from the fact that the middle temporal artery had been divided longitudinally. A second incision was started from the middle of the first, and carried directly forward along the line of fracture, ending about the middle of the coronal suture. At this point a piece of depressed bone, broken from the right parietal, was found, and removed with forceps, after first severing adhesions with the dura mater. The fragment removed embraced both tables of the skull, was wedge-shaped, with the apex posterior, and about two inches in length. Much pus escaped from the cortex of the brain after this incision. A third incision, joining the beginning of the last one, was carried backward to within a short distance of the lambdoidal suture to a point about two inches below the posterior fontanel, liberating more pus and broken-down cerebral matter. With the finger the entire length of the fracture could now be explored, extending from the middle of the coronal suture in front backward through the middle of the right parietal bone to the lambdoidal suture, and with a separation of this suture upward to the posterior fontanel, and extending for some distance between the left parietal bone and its articulation with the occipital bone. The separation along this entire line was as much as half an inch, and that in the right parietal bone was due to an outward bulging of the lower fragment. Strands of hemp were used for drainage, and the wound brought together over this by the interrupted silk suture. Our patient was now pulseless at the wrist and blanched from loss of blood. Ether had been used during the op-

eration. A hypodermic injection of atropine was administered, and the boy placed in a warm bed. During the night he revived, became very restless, and by accident was permitted to remove the hemp drainage.

October 19.—His pulse was 160, and paralysis had again occurred in the left leg. Suppuration continuing freely, the stitches were all removed and the wound treated openly.

October 20.—The brain-matter has now protruded through the fracture, rising up above the scalp, and forming a large hernia cerebri along the entire length of my incision over the parietal bone.

The paralysis in a few days disappeared from the leg, and his general condition gradually improved until the 27th day of November, when he again had a chill, followed by frequency of respiration and a temperature of 103°. An incision was made into the separated lambdoidal suture over the fracture in the posterior part of the right parietal bone, but no pus was found.

November 28.—He feels sick, has severe bronchitis, and a pulse of 130.

November 29.—Pulse 160; patient complains of headache and chilliness, and has a temperature of 101°.

December 1.—Temperature 100½°; pulse 132. Calomel ordered in small and repeated doses, to open the bowels. During the night there was a separation of a scale of bone and a sudden discharge of matter from within the cranium. Next day, temperature normal, and paralysis has disappeared from both the leg and the arm, leaving the muscles very weak.

He was out of bed now every day until December 14, when he fell, striking a chair with the occipital bone near the seat of fracture. Considerable bleeding occurred through the wound, and the child became sleepy; he remained so throughout the next day until towards evening, when fever occurred, and, for the first time, irregularity of the pulse.

December 16.—The pulse intermits every six or eight beats; temperature 98°. The muscles are gaining strength slowly, so that he can walk across the room with simply some staggering. This also disappeared in the next week, and the hernia cerebri was destroyed by daily application of a ten-grain solution of nitrate of silver.

January 13.—Removed a piece of the outer table of the anterior third of the upper fragment of the parietal bone.

January 24 and 30.—Removed scales of bone from the middle third of the same fragment.

February 12.—Ether administered, and a long piece of the outer table of the posterior third of the upper fragment of the parietal bone was removed. The anterior half of the fracture is closed by a thin, soft tissue that pulsates synchronously with the respiratory act. The rest of the fracture was gradually closed by a similar soft, bluish tissue, and the

boy fully recovered his former strength and activity.

August 9, 1885.—By actual measurement, an opening in the skull still exists five and three-quarter inches long and three-quarters of an inch wide. The pulsation of the brain is distinctly seen through the cicatrix.

Recovery from this uncommonly severe injury is certainly remarkable, and makes the case worthy of record. There was also a suit for damages against the owner who had permitted his horse to run at large. The damages claimed was ten thousand dollars, and the verdict rendered by the jury was for five hundred dollars. It was distinctly shown the court that, although the boy had apparently recovered, he was still incapacitated from pursuing some of the ordinary avocations for a livelihood; that if he was struck on the top of the head a severe blow, the violence, instead of being distributed to the adjoining bones, as occurs in a normal skull, might crush in the upper fragment of the right parietal bone, which was now supported solely by its articulation with its fellow and the frontal bone in front, and cause the death of our subject. The verdict was set aside by the judge on the ground that it was not enough.

Since the defendant had before the trial conveyed all his property to friends, and then immediately after the judge's decision removed to Kentucky, no further action was taken in the case.

SPRAIN OF ANKLE-JOINT TREATED BY REST AND COMPRESSION WITH AN ELASTIC BANDAGE.

BY T. A. CUNNINGHAM, M.D.,

Captain, and Assistant-Surgeon, U.S.A., Post-Surgeon, Fort Lewis, Colorado.

THE following case of severe sprain of the ankle-joint, successfully treated in a woman 60 years of age by the elastic bandage, may prove of interest.

Mrs. I., æt. 60, wife of Captain I., Twenty-Second United States Infantry, received a sprain of the ankle-joint on April 3, while moving her household effects from one house to another, her husband's quarters having been taken by an officer who ranked him. This regulation is known in the army as "turning out," and sometimes, as in this case, is a matter of serious trouble and inconvenience. I saw her about ten minutes after the accident occurred, and found the parts in

the following condition. Sprain of the ankle-joint, rupture of the external lateral ligament, and the foot turned inward to such an extent as almost to amount to a dislocation; also effusion of the articular fluid. The foot was straightened and the joint well rubbed with lotio plumbi subacetatis et opii, and then an Esmarch bandage, which had been condemned for its original use but still retained sufficient elasticity to compress the joint, was firmly and evenly applied to the entire foot and joint and for about two inches up the leg. The foot was kept in an elevated position, and the patient kept in bed.

April 4, 9 A.M.—Patient slept well, and has suffered no pain to amount to inconvenience. Bandage was removed, and the entire joint was found to be ecchymotic and very tender to the touch. The parts were well rubbed with camphorated oil and the bandage reapplied.

This treatment was continued, and at the end of the fourth day she was able to get up and attend to a few of her household duties, suffering no pain or inconvenience from the bandage, but rather regarding it as a support. She attempted sometimes to take off and do without the bandage, but she was compelled to come back to it, as she could not walk without it.

She was discharged at the end of three weeks, perfectly cured.

I consider the elastic bandage the treatment *par excellence* for sprains, if seen early and before much swelling has taken place, for the following reasons:

1. It promotes absorption of the effused fluid.
2. It prevents undue swelling.
3. It can be more smoothly and evenly applied, and by its resiliency supports and relieves the torn and sprained tissues much more satisfactorily, than an ordinary bandage.
4. It allows the patient, after a few days, to attend to nearly all of his or her ordinary avocations about the house.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF DR. J. M. BARTON.

Reported by J. M. FISHER, M.D., Resident Physician.

FRACTURE OF THE INTERNAL CONDYLE OF THE HUMERUS.

THIS man, aged 32 years, a tall, stout, and powerful mechanic, had his right arm caught three days ago in the belt of some machinery. The whole arm is greatly swollen, especially so about the elbow-

joint. It is discolored by blood effused beneath the skin, and is quite painful. There is no deformity discernible further than that produced by the swelling. You see he carries it midway between full extension and a right angle, and carefully supports it with the other hand the moment I release it. Now carrying my finger along the posterior surface of the ulna, I am able to trace its entire length, and to determine that there is no fracture of the shaft or of the olecranon. Then taking hold of the patient's hand with my right hand, and placing the thumb of my left hand over the position of the head of the radius, I attempt to rotate the limb, but, owing to the amount of muscular spasm, which renders the arm rigid, I am unable to do so to any extent,—not enough to feel the radial head through this amount of swelling, but sufficient to get some indistinct crepitation. As this muscular spasm interferes with my examination, I will have the patient etherized and then proceed with it. The patient, however, refuses to take ether. Under these circumstances we will refuse all treatment, and direct the patient to seek advice elsewhere; and let me here remark, gentlemen, do not permit yourselves to show any temper under such circumstances. The patient does not know the serious nature of a fracture about the elbow-joint, and, as there is no manifest deformity, thinks there can be but little injury. And, further, do not permit your sympathy for the patient or your cupidity to tempt you to undertake the treatment of such cases without first thoroughly examining them, under an anæsthetic if necessary.

If, owing to the importunities of the patient, you do so, and the arm is at all imperfect when the treatment is terminated, such patients are the first to sue you for damages for malpractice. Take a firm stand; let him seek other advice; or, if you are where other advice cannot be had, state in the presence of competent witnesses your reasons for wishing to give an anæsthetic, and carefully define your position before treating such a case.

Our patient, who has listened to these remarks, has now changed his mind, and desires to take ether. Having him fully anæsthetized, I readily rotate the forearm, and, finding the head of the radius rotating freely in its normal position, I determine that neither the ulna nor the radius is dis-

located or fractured. Now, seizing the arm about its middle firmly with one hand and near the wrist with the other, I fully extend the arm and attempt to move it laterally.

You know the elbow-joint is a true ginglymoid or hinge-joint, and permits no lateral motion whatever in its normal condition; but this joint moves freely laterally, and the motion is accompanied by distinct crepitation. As we find the shaft of the humerus intact and the radius and ulna free from injury, this free lateral motion, accompanied by crepitation, indicates clearly a fracture of one of the condyles. Now grasping the humerus by both condyles, one with each hand, I find the inner one moves, and upon pressure crepitates. We therefore make the diagnosis of fracture of the inner condyle.

The arm can be readily extended under ether, and, as the broken condyle shows no disposition to upward or other displacement (if it did, the natural angle of 5° between the arm and forearm would be lost), I shall simply flex the forearm until it is nearly at a right angle with the arm, and place it in a sling made from a three-cornered piece of muslin, reaching from the elbow to beyond the hand, fastened with several stitches, so that the arm cannot be removed. I shall direct him to report here every other day, and if I find any deformity occurring I shall use such appliances as appear best adapted for its correction.

REMOVAL OF A TUMOR FROM THE MALE BLADDER.

This German, 36 years of age, from the interior of this State, has suffered for several years from cystitis. He now passes his water over fifty times in the twenty-four hours. During the last twenty-four hours he has passed water, by actual count, fifty-four times.

His difficulty began several years ago, with the passage of blood. It was not until he had passed blood several times that the bladder began to be irritable. He presented himself to me a year ago with the same symptoms. On examination at that time I found no evidence of any calculus, nor any prostatic enlargement. The urine then contained pus, phosphates, and the usual evidences of cystitis. I failed to detect at that time, though I made repeated microscopic examinations, any shreds of tissue from any foreign growth. With the sound, however,

I felt several places which were slightly elevated and irregular. The examinations were usually followed by hemorrhage, no matter how delicately the instrument was handled. At that time the bladder was washed out, several times daily, with a solution of borate of soda. He improved rapidly and left the hospital. This history was repeated a few months later, when he returned with his old symptoms. In a few weeks he was again relieved and left,—I promising him at that time that, if his disease returned, I would explore his bladder by an opening in the perineum.

To-day he again presents himself, worse than ever. He now urinates fifty-four times in the twenty-four hours, and frequently passes blood. The blood is not by any means fully mixed with the urine, but appears at the beginning or, more frequently, at the end of urination. He has been passing blood for four years. It was the first symptom noticed, and continued even when the cystitis was temporarily relieved.

If the blood came from the kidney, it would probably be thoroughly mixed with the urine, and would not be of the fresh, bright color of that passed by this patient. If it came from the urethra, it would, of course, appear at other times than during urination, and we would have some history of traumatism or some foreign growth or other obstruction detected on the introduction of the instrument. We can therefore exclude these two extraneous sources of the hemorrhage, and regard it as coming from the bladder.

The character of the clots will often give important information as to the source of the hemorrhage. By floating the clot in water its form can be readily studied. Coagula from the bladder are flattened and irregularly circular; when from the ureter, they are long and thread-like; when from the urethra, they are a cast of that canal; and when from the prostate, they are fusiform and flattened. Here they are evidently of vesical origin.

Now, hemorrhage from the bladder is caused either by stone, enlarged prostate, ulceration, or a tumor. As the result of some acute diseases, or from the effects of certain drugs, or from the vesical parasite the *Bilharzia hæmatobia*, blood is occasionally passed from the bladder. We can here regard it as coming from calculus, enlarged prostate, ulcer, or tumor.

In vesical calculus bleeding is not a common symptom, does not occur until the cystitis has become very severe, and is not frequent unless ulceration has occurred, and under no circumstances is it an early symptom, nor would it continue when the cystitic symptoms have been temporarily relieved.

The same remarks are applicable to ulceration in the walls of the bladder, no matter how caused.

In enlarged prostate, hemorrhage is not uncommon; but our patient is only 36 years of age, and is entirely too young to have his prostate much enlarged. However, we will examine by the rectum, and we do find his prostate slightly larger than normal. Fully to exclude the prostate from being the source of the hemorrhage, we can regard the cystitis and the hæmaturia as both springing from the same cause. Now, an enlarged prostate causes cystitis by first preventing the bladder from emptying itself by its mechanical effect: thus some of the water is retained, and the residual urine, becoming offensive, causes the cystitis. If the cystitis be due in this case to the slightly-enlarged prostate, the patient will have residual urine. I will therefore get him to empty his bladder as far as he is able, and, now that he has finished, I introduce this soft catheter into his bladder. No urine passes; the bladder is empty. So now we can exclude the prostate as being the cause of his cystitis and of his hæmaturia.

This exclusion leaves us some form of tumor as existing in his bladder, and the symptoms of some form of vesical tumor are well marked in this case. The early and constant hemorrhages are almost typical. It needs but some shreds of the growth to be found by the microscope to make the diagnosis certain. These we have not been able to find, though searched for several times. The most frequent forms of vesical tumor are papilloma, epithelioma, fibroma, and sarcoma.

As the disease has existed for several years, we can exclude the malignant growths, as they would by this time have either proved fatal or had more effect upon the patient's general condition, and, as the fibromas but rarely bleed, the diagnosis in this case is probably papilloma of the bladder. These growths may be pedunculated, but are more frequently attached by a broad base. Cases are on

record where growths rising but slightly above the surface of the mucous membrane and covering but a small area gave rise to the most severe symptoms.

With a cystitis of the intractable character that we have here, even without the strong probability of the presence of a tumor, we would be warranted in making an exploration of the viscus through the perineum.

Even in an idiopathic cystitis, if such a condition ever exists, such an incision may be used as a method of treatment on the failure of other measures.

Our patient now being well under the influence of ether, a large staff is introduced into the bladder. He is placed in the lithotomy position, and I make an incision in the median line, about one inch and a quarter in length, beginning one and a half inches in front of the margin of the anus, and extending nearly to it. After the first incision I feel for the staff and have it hooked well up under the pubes, so that I may not injure the rectum. Now, carefully avoiding the bulb, I cut through the membranous urethra and insert my knife into the groove of the staff at that point. Keeping my knife in the groove of the staff, I cut into the bladder; then, slightly lateralizing the knife, I incise the prostate at each side, so as to have free room for examination. You noticed that, just before introducing the staff, I injected the bladder with some warm water: by thus distending it and separating the walls I prevent their injury by the knife.

I now introduce my finger, and readily feel the entire inner surface of the bladder. There is no large tumor or other foreign material in it; but on the upper surface there is a soft, velvety mass. It is irregular, and covers probably two or three square inches of surface. I will seize a small portion with a long and delicate pair of forceps. On bringing it out and laying it upon a piece of paper, the characteristic shape and appearance of a shred of papilloma are readily seen. My colleagues who are here all agree regarding its characters.

Now, taking these curettes of various forms and guiding them carefully with my finger placed upon the vegetations, I scrape away quite a mass, which you see here. Again taking the forceps, I remove several larger pieces, using the scraper again until in this way I have removed all

the disease I can detect. These manipulations are followed by rather free hemorrhage, which I think will readily cease without special treatment.

[REPORTER'S NOTE.—There was some bleeding for forty-eight hours, but not enough to require any treatment. The lips of the wound adhered the morning after the operation, causing retention and pain. This was relieved by the introduction of a large soft catheter through the wound into the bladder, where it was permitted to remain for three days. After its removal the urine was passed by distinct acts of micturition, most of it passing by the wound.

At the expiration of ten days the patient passed his urine but six times in the twenty-four hours, most of it by the urethra, a few drops only making their exit at the wound.—J. M. F.]

TRANSLATIONS.

A NEW THEORY OF VACCINATION, AND THE CAUSE OF THE REGENERATION OF A SUSCEPTIBILITY TO VARIOLA.—Dr. S. Wolffberg, in the supplement to the *Centralblatt für Allgemeinen Gesundheitspflege* (Bd. i., Hft 4), gives an ingenious explanation of the prophylactic effect of vaccination in preventing smallpox, and of the cause of the subsequent regeneration of susceptibility,—a theory which is also applicable to other self-protective diseases. Pfeiffer considered that the increase of microbes in the blood was the principal agent in the systemic infection, and necessary to protect the organism. Wolffberg, however, regards vaccination as a selective process, which affords protection by eliminating those elements which are too weak to resist the action of the specific poison. The increase of the infective material takes place especially in the rete Malpighii of the epidermis, generally, and in certain of the mucous membranes; and everywhere it causes the specific alterations, which in the case of the vaccinia and variolous efflorescences are substantially identical. Now, the bacterium, in proportion to its intrinsic virulence and the resisting power of the elements of the epidermis to its destructive action, acts directly upon the elements of weaker resistance and they are thrown out. In the resulting reaction of the elements

of greater resisting power, the germs are forced into groups, in which they subsequently, more or less completely, undergo degeneration. After the course of the vaccination or inoculation has been completed, it is evident that only those elements remain which were able successfully to resist the virus. This elimination of the cells of feeble resistance proceeds very differently in vaccination, inoculation, and natural smallpox, but the stronger cells and cell-elements always remain; and, since it is through the increase of the latter that the epidermis is restored, immunity is in this way established. The primary susceptibility and immunity are, therefore, connected with the cells of the rete Malpighii. This principle of selection apparently may also be extended to the other infectious diseases which confer immunity, but it is necessary in each case to determine the earliest localization, and to study particularly the primary histological changes.

As regards the establishment of the susceptibility to smallpox, both statistics and experiment point to the conclusion that, as it is the rule after variola and a good vaccination to have the disposition completely extinguished, so it is an exception after variola, but the rule after a poor vaccination, to have the disposition only partially—i.e., in a higher or lower degree—exhausted. In childhood, after the primary vaccination the susceptibility is gradually restored, so that at fifteen years of age revaccination should be practised, with even more care than in early childhood.—*Berliner Klinische Wochenschrift*, No. 29.

[This theory conforms closely with the view, so long held, that one attack of an eruptive disease usually protects against a second one by "exhausting the soil." The observations of Weigert (1874) established the fact that the destructive force of the variolous poison was first directed to the lower cells of the rete Malpighii, where Weigert and Cohn found micrococci.—Tr.]

MICROBES OF NORMAL SECRETIONS AND THE SYPHILIS-BACILLUS.—At the last meeting of the Académie de Médecine, M. Cornil read a communication relative to work done in his laboratory by Messrs. Alvares and Tavel upon the supposed microbe of syphilis. The conclusions at-

tained after considerable investigation were as follows:

1. There exists in some normal secretions of the organism (smegma, etc.) a bacillus which has not hitherto been described.

2. This bacillus is identical in its form and color-reactions with that which Lustgarten has described as peculiar to syphilis.

3. It may be that the bacillus which Lustgarten found in his sections of the products and in the syphilitic secretions is only this common bacillus.

4. This bacillus bears a great resemblance in its form to the bacillus of tuberculosis, and presents several of the color-reactions considered hitherto as special to the bacillus of Koch and to that of leprosy.

5. It is distinguished from the tubercle-bacillus (besides its less thickness and its less granular appearance, conditions which are difficult to appreciate in a single examination) by its less resistance to alcohol after staining with fuchsin and treatment with nitric acid. It is also distinguished by the failure of Ehrlich's method for staining with methyl-violet.

6. In the clinical diagnosis of tubercle made by histological examination of the secretions, account should be taken of these facts. Although this bacillus has not yet been fully studied by cultures, the reporter believes that we should be very circumspect before admitting that the bacillus of Lustgarten is in reality the cause of syphilis.—*Le Progrès Médical*, No. 32.

DIAGNOSIS OF CHANCROID.—In a doubtful case, time is the most important element in the diagnosis of the chancroid, although inoculability is a test which, according to Zeissl (*Annales de Dermatologie et de Syphilis*), without being absolute, greatly facilitates diagnosis. Inoculation with the secretions from the soft venereal sore produces an ulcer more rapidly than ordinary pus, which it is admitted is also inoculable when placed under the skin or on a surface deprived of its epidermis.

ERGOT FOR HICCUGH.—A correspondent in the *Lancet* calls attention to a new use for an old remedy. A policeman had hiccough which resisted all the ordinary means of relief, and he was passing into collapse, when drachm doses of liquid extract of ergot were ordered, with complete relief. Only three or four doses were required. After a period of rest the hiccough returned, but was again stopped by the ergot, and did not reappear.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, SEPTEMBER 5, 1885.

EDITORIAL.

INDIRECT CAUSES OF SUMMER
DIARRHŒA IN INFANCY.

ALTHOUGH abundant opportunities for observation are supplied, it is evident from the writings of authorities that full accord has not yet been reached in the questions of the etiology, pathology, or treatment of bowel-disorders in young children in hot weather. It is probably true that twice as many infants die from this cause in summer in our large cities as die from it in the country, and that two and a half times as many die in cities from bowel-affections as die from other causes; but the most obvious explanation, that heat and peculiar conditions of city life are directly responsible for the great mortality, is by no means to be accepted without question. Some writers, regarding the bowel-disorders as the direct effect of the high temperature upon the nervous system, have not hesitated to recommend their treatment by cold applications, as if the symptoms were due to a sort of thermic fever. There is also a prevalent opinion that a change of air, a visit to the sea-side or to the country, is the panacea for all such disorders. It is certain that comfortable and seasonable clothing, and good hygiene, are important,—in fact, their importance can scarcely be overrated,—but there are other factors in the problem which deserve attention and may decidedly modify the treatment required.

In the first place, although the number of cases and the rate of mortality are associated with periods of excessively high temperature, it rarely happens that infants suffer from thermic fever or overheating. The suffering caused by the heat is indirect

rather than direct, and may be due to deficient supply of oxygen, owing to long-continued rarefaction of the air, as well as to the presence of atmospheric impurities, which thrive in the heated stagnant air in particular parts of the city where filth abounds. The remedy for this would be not ice and cold bathing, but purer air.

Children are most likely to be attacked by entero-colitis after being chilled, as when the weather suddenly becomes cooler during the night. The clothing of the child should not, therefore, be reduced below the point of safety, nor should too much heat be abstracted from it by frequent cold bathing.

While it is undoubtedly advantageous for some children to be taken away from the city in hot weather, it is simply impossible for all. Nor is it a panacea for all who do go, for many are brought back as ill as when they departed, and deaths of babies at the sea-shore occur every summer. These considerations make us hesitate before issuing the mandate to take children away, or refusing to treat a case in the city. It is, however, a melancholy fact that many parents live under extremely unhygienic conditions, and, not being healthy themselves, cannot procreate healthy children. "Unfit to survive" is nature's verdict in many such cases; and when the little one gives up the struggle, the death is charged to "teething" or, too often, to "summer complaint." These children, as a rule, would die anywhere and under the best of care. Moreover, a greater proportion of the children are hand-fed in the city than in the country; and, as their digestive organs are constantly overtaxed by improper food, they frequently succumb in their second summer to digestive disorders. The milk that is supplied is rarely good and fresh. When the grass is burned up by the July sun and pasture is poor, cows are apt to eat everything; and after eating *Rhus toxicodendron* they give milk that will cause sick-

ness in children. Dr. Parkes* says that this does not happen where the milk is boiled; and this practice has received additional support from the possibility of the transmission of tuberculosis by milk, as shown by Chauveau.

The introduction of pepsin and pancreatin into infantile dietetics has done much to prevent the severe attacks of indigestion and bowel-disorder in infants habitually fed on cows' milk.

It is evident that much of the mortality of young infants in cities is inevitable under present conditions, that excessive bodily heat is not the sole or the essential cause of bowel-disorder in infants in hot weather, and that other measures are usually needed than simple change of residence.

THE NEW BUILDING FOR THE NATIONAL MEDICAL MUSEUM AND LIBRARY.

AT last, after years of weary and at times almost hopeless waiting, the great Medical Library of the Surgeon-General's Office and the Army Medical Museum are about to receive a safe and permanent home. Since the war, Ford's Theatre, the scene of the assassination of Lincoln, has been used for this purpose; but the danger of the total destruction of these magnificent collections by fire has been a source of grave anxiety to the Surgeon-General of the army and his assistants. Now, however, this danger will soon be past. The last Congress made an appropriation of two hundred thousand dollars for the purpose of building a fire-proof structure for the museum and library, and a commission has prepared plans and given out contracts for its construction.

The building will be mainly of brick and iron, and will consist of a central building, of one hundred and twelve feet front, flanked by wings of sixty feet front

each. The depth of the wings, in which the museum and library are to be placed, will be one hundred and thirty-one feet.

The entire structure is to be built in the most substantial manner. The decorations will be appropriate, consisting of brick and terra-cotta mouldings and cornices, and a line of blue-stone trimming around the building at the height of each story. Crown mouldings, cornices, and lanterns will be of galvanized iron.

There will be very little wood-work about the building, in order to make it as nearly fire-proof as possible.

It is expected that the building will be ready for occupation in about a year and a half.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE event in the medical world lately has been the fifty-third annual meeting of the British Medical Association, which came off at Cardiff. Dr. William Thomas Edwards, physician to the Glamorganshire and Monmouth Infirmary, and the leading physician in the town, presided, and delivered the introductory address. He had not the learned leisure to prepare a philosophical address, he explained, so he gave some particulars of the town and neighborhood. Why several hundred medical men who are out on a pleasure-trip, each having dined well and sumptuously, should pack themselves like herrings in a barrel to hear the history of the town they are visiting, is one of those mysteries which will never be explained, even at the opening of all hearts. However, according to custom, and to evince their respect for the personal character of their President, they did so pack themselves while Dr. Edwards told them that at the commencement of the present century the population of Cardiff was but eighteen hundred, and that the coal was brought down from the hills on pack-horses to the small craft that then entered the Taff. Now they ship away twenty-five thousand tons of coal daily, and the long mineral trains on the Taff Vale Railroad extend for miles in an almost unbroken succession, with the consequence that passengers are at a discount, fares are high, and the train-service anything but encouraging to travellers. If the coal of England is to be exhausted in a given period, he said, Cardiff was doing its best to bring about

* Practical Hygiene, 5th edition.

the consummation. He drew a picture of Macaulay's New Zealander ("who at that time would probably speak Welsh," he threw in as a parenthesis) looking over the ruins of its docks and its piers. Whatever may be the case when the coal has been worked out, at present the country near Cardiff is simply seamed with railways. Up the valleys go the main lines, with branches innumerable running into every ravine and often climbing a height,—it does not matter where, provided there is coal at the end of it. Given the existence of a bed of coal which can be profitably worked, then the Welshman lays down a couple of rails and gets a locomotive on them, even upon a mountain-top, and then away goes the coal to the seaport.

In the development of the wonderful coal industry of South Wales, Cardiff has held a prominent part as the main seaport. Coal had brought wealth, and the leading landowner, the Marquis of Bute, had laid out his capital lavishly in docks, which have greatly added to the prosperity of the town.

Having impressed them with the importance of their surroundings, he proceeded to give a brief account of the advances recently made in medicine, and especially those in which the Association had borne a part. He eulogized the work of the Collective Investigation Committee,—a scheme for tapping the experience of the members which as yet has produced no very startling results, but which, he said, "will bear ample fruit." He also thought the Association "had done very much to raise the moral as well as the scientific status of the profession," and explained how it drew men together and made and cemented friendships, and so was doing a good work: all of which is possibly true and is certainly desirable. He paid a compliment to the profession at large, and spoke of medical men as—"putting aside all merely sordid and selfish considerations, they are governed by a pure love of science and an earnest desire to benefit their kind:" which tells that Dr. Edwards is a genial, kindly-hearted man, if not a great genius.

After this came the report of the Council, which was a very satisfactory one, telling of increasing prosperity and waxing growth. Then came the wonted discussions. First, the poor attendance upon the Council meetings, which, it was explained, was due to the different members of it having to pay their own expenses while engaged on the work of the Association. As the Association is now rich and putting by money every year, it was held by some that it ought to pay for its work. Then cropped up the question of new premises in London, and the investing of these savings in their purchase,—on which, of course, varying opinions were found to exist. Then about representatives of the branches opinions again varied. Some were in favor of the branches having representatives non-resident within their area, but these were over-

ruled. So the principle of direct representation, having been adopted, is so hampered in the practical working that it is of comparatively little utility, and the rule of the Association is still, to a large extent, that of the favored few.

Next morning the great event was the address of Dr. William Roberts, F.R.S., of Manchester, the author of the excellent and well-known work on urinary diseases,—a bright, genial, active-minded little man, who is very popular. To him we owe most of what is known about the artificial digestive ferments and their utility in practice. He chose the subject of "Therapeutics" for his address, a fact which shows that the profession is beginning to think about what the patient expects for his money. He expounded the existing ignorance upon the subject, and insisted that the dietary of the sick must be based upon the dietetic customs of the healthy, and "these customs must be regarded as the outcome of profound instincts, which correspond to important wants of the human economy." He contended that systematic study of dietetics was not practised at the present day, in words as follows: "So far as I know, there is no systematic teaching of dietetics, even on the most limited scale, afforded to the student at any of our medical schools. He is left to pick up his knowledge of the subject as best he may during the earlier years of his practice, and he often ends by taking his own digestive organs as his type, and prescribes for his patients according to the likings and dislikings of his own stomach. This, I need hardly say, is a very unsatisfactory proceeding, for there is perhaps no subject in which individual experience is so fallacious a guide as dietetics, and none in regard to which it is more important to draw our inductions from a wide basis of facts."

So much for Dr. Roberts's opinion of modern medical teaching on this important subject. He then spoke of the dietetic arrangements of civilized countries as directed to the supply of nutriment to the body, after which he referred to individual necessities or idiosyncrasies requiring modifications: so that "we may distinguish in a rough sort of way the patients who seek our aid in the matter of diet into two classes,—namely, first, those who are able to take and to digest solid food, and to conform in the main with the general dietetic habits of healthy people; and, secondly, those more seriously sick, who can take little or no solid food, and must be fed on a plan deviating widely from the common custom." Speaking of variety of food being desirable for all, healthy and sick alike, he said, "This variableness or variety, we cannot doubt, fulfils some useful purpose beyond the mere gratification of the palate. It may then be inferred that to prescribe a monotonous regimen is to contravene a beneficial rule

and to depart from a salutary principle in human dietetics. We know that a healthy man soon rebels against a daily repetition of the same dishes, however wholesome and savory; much more an invalid, with weak appetite and feeble enjoyment of his meals, who craves for more change and variety than the robust." Quite right, Dr. Roberts; but how much time, toil, and personal experience are requisite to attain such a familiarity with the dietary suitable for the sick and invalid? Only those who have struggled with the question manfully can tell. "Another part of our duty," he continued, "is to study the peculiarities and idiosyncrasies of the invalid's stomach. Our stomachs are nearly as individual as our noses, and are very peremptory in regard to their likings and dislikings." And yet of this important matter no teaching exists in any of our medical schools! Probably after this address of Dr. Roberts's the authorities who rule medical education will waken up on the matter.

After some more honest, plain speaking, he went on to consider the effects of certain accessories to our food upon the digestive processes. His conclusions are highly interesting. Distilled spirits exercise but a trifling retarding effect upon the digestive process, while wine and malt liquors exercise a far more pronounced retarding influence. Consequently, we can comprehend why a little spirit-and-water has been found the best drink for the dyspeptic. Effervescing table-waters added to wines and spirits "may be looked upon as highly commendable in the case of persons of weak digestion." Tea was found to have an intense inhibitory effect on salivary digestion, while coffee and cocoa were less potent in this respect,—mainly because they were taken in weaker infusion.

He concluded by a long consideration on "Feeding the Sick with Liquid Food," of which no abstract is possible here, the matter being well worth study in its completeness.

The address on Public Medicine was delivered by Dr. Dyke, the kindly, well-known, and respected medical officer of Merthyr-Tydfil. The valleys of the Taff Vale are deep sulci among high hills, narrow and long, with a multitudinous population, so that their sanitary arrangements have had to receive special consideration. The sewers run together at a point below the towns, where the sewage receives the lime and alum which throw down the objectionable matters, so that the effluent water which flows into the Taff is "considerably purer than the Thames water which we are often compelled to drink in London." The result is highly satisfactory. The water for the use of these towns is collected from the streams above them, which provides an ample supply, the districts forming part of the wealthiest area (or one of them) in the United Kingdom. In the whole arrangements self-help has been the motto

of the people, and to elaborate arrangements is added close and keen inspection.

In the Medicine Section, Dr. S. Wilks, the famous pathologist, delivered an opening address on "Some Causes of Disease, and on Reparative and Destructive Processes." First came racial and family tendencies giving a liability to certain morbid processes. In England there were a number of conditions tending to bring about the gouty constitution and also to morbus Brightii. Disease is slow in progress, and commonly a long departure from health precedes what is regarded as acute disease in the healthy. Really acute disease is often an outcome of long-acting causes, and "peritonitis is usually but the termination of old disease in the abdomen, and a meningitis the ending of prior disease in the brain." In speaking of recent research, he said, "I cannot be blind to what is now occupying the medical mind, and therefore, with all sadness, confess the truth, my occupation's gone. It is of no use talking any longer of the conditions of our climate predisposing to phthisis; of the heredity of the disease, much less of any peculiar conformation of chest and frame in those who fall a prey to it: for the disease is due to a bacillus which may be taken by a husband from his wife, or *vice versa*, or conveyed by a phthisical nurse to a number of children whom she suckles, or even indeed be caught in the street; at least this was suggested in the case of a lad who died of tubercular meningitis, having long had a sore tongue which was called tubercular. It was surmised that it was primarily a simple ulcer on which bacilli alighted as he walked through the streets." This is rather severe criticism, and demonstrates the absurdity of pushing the bacillus-explanation too far.

Dr. Wilks went on: "I do not for a moment attempt to throw any discredit on modern research,—for these bacilli undoubtedly exist, as any one may prove for himself; but I am rather offering myself for pity, that, having preached on one long text, that it is the great aim of the physician to seek the causes of disease in our ordinary surroundings and in the tendencies transmitted to us, and to try to remove them, I find my occupation gone. But perhaps I am only shunted to let the express pass by." After pointing to the relations existing between pathological research and the therapeutic management of disease, he said something about the proportion of organs to their use. If one kidney be destroyed, the other enlarges to compensate for the loss. The same probably occurs in other organs. Where a portion of the liver has been destroyed, the other lobe has proportionately enlarged; and in some chronic affections of one lung the other one has evidently grown to maintain the balance." Sometimes a certain tissue in the body will start into growth out of relation to the rest of

the body, as the spleen, for instance; or the adipose tissue may develop abnormally. Sometimes when important organs are chronically diseased, as in the kidneys, for instance, other organs take up their function and discharge it vicariously. Sometimes the disease in an organ is so extensive that the wonder is the individual survived so long and reached such an advanced stage. Renal inadequacy has been the subject of much attention of late. Many destructive processes are accompanied by reparative processes, involving, however, lowly tissue-material, and not normal and higher histological elements. Such is common in disease of the lung, and the *semeia* furnished are often due rather to the reparative than to the destructive process. In the pseudo-hypertrophy of muscles there is destruction of normal tissue, with a rank growth of new tissue functionally useless.

The address on Surgery was delivered by Prof. John Marshall, F.R.S., of University College, who contrasted the surgery of the past with the surgery of the present. He was one of Liston's dressers in 1844-45, and he compared the surgery of that year with that of 1884-85. The subject does not admit of abstraction, and those curious in the matter must study the address *in toto*.

Prof. Edward Bennett, of Dublin, presided over the Surgical Section, and chose for his opening remarks "Injuries of the Bones." He argued in favor of duplicate specimens in our museums rather than the present plan, and of extended pathological and clinical observation of bone-injuries.

In the Obstetric Section, Dr. Gervis, of St. Thomas's Hospital, discussed "The Death-Rates from Childbirth and Cancer; Value of Antisepsis in Midwifery." In the first matter he held our progress to be favorable. Of antisepsis he spoke favorably, though the machinery was cumbersome for ordinary practice.

In the Department of Public Medicine, Dr. D. Davies, Medical Officer of Health for Bristol, presided. He said, "Men eminent in science and celebrated for the originality of their investigations have endeavored to discover the real microbe which is supposed to be the immediate cause of cholera; but, alas! when some of us at least thought that we had discovered our mysterious enemy, the cup was dashed from our lips; doubts of a serious character have overcast our hopes. One eminent investigator has been swallowing the 'bacilli' of another equally eminent, to prove their innocence and inertness." With "unsatisfied aspirations," the workers have had to struggle with the disease.

In the Section devoted to Psychology, Dr. Yellowlees, of Glasgow, led off with a consideration of the "Causes and Prevention of Insanity." He said, "During the dark period when insanity was at once the reproach of medicine and the horror of the public, the

mere suggestion that the nervous system required wise and watchful care was resented as an insult, because it seemed to impute a liability to mental disorder. Now that insanity is no longer deemed either a crime or a disgrace, there is some hope that the counsels and warnings of the physician may receive greater attention." He continued, "The causes of mental disorder group themselves at once into two categories: those arising from conditions in the life-history of the individual, and those entailed upon him by ancestral inheritance." These may coexist. Brain-injury in certain persons of the insane diathesis is very liable to start up changes which culminate in insanity. Brain-exhaustion from overwork is another common cause. Overwork is found everywhere at the present day, even on holiday tours. Work is often protracted and incessant, done for the best of motives; but this brain-exhaustion "is too high a price to pay for anything on earth." Alcoholic and sexual excesses are also potent factors in other cases. The first need not involve "a man being a drunkard before he can develop insanity or transmit it to his offspring." The practice of giving wine to children he strongly denounced. Of the second he spoke also in strong terms of all its forms. Then came brain-starvation, a factor in other cases. Irritation of the brain set up by disease elsewhere is another cause. Of inherited predisposition he said, it "is not a mysterious and fateful doom, haunting and dogging its victim, and sure one day to overtake and overwhelm him. It is a purely physical condition, and loses half its terrors when this is realized. But the man who is the inheritor of the predisposition should lead a life of healthful exercise of the brain, while he must not pore unremittingly over the merchant's ledger, nor burn the midnight oil in exploring the arcana of science, and we must absolutely debar him from the rivalries of politics and the excitement of the stock-exchange." All taxation of the unstable brain must be scrupulously avoided. Indeed, the tendency to insanity must be treated rationally, like the tendency to phthisis. Dr. Yellowlees veritably spoke words of weight and reason, and probably most readers of the *Times* will see and enjoy his address in its entirety.

Henry Power gave the address on Ophthalmology, which, it is needless to say, was worthy of its gifted author.

Professor Fraser, of Edinburgh, opened the Section on Therapeutics, and expounded the properties of the *Strophanthus hispidus*, which seems likely to largely take the place of digitalis; Dr. Murrell remarking that, oddly, this year is the centenary of Withering's famous treatise on digitalis.

Of the work of the Sections nothing may be said at present, except that some reference

to the work done in them, and especially the discussion on glycosuria, may appear in a future letter.

On the whole, it may be said that the annual meeting of the British Medical Association is not losing its popularity exactly, but, amidst the amount of festivity and hospitality now obtaining, there cannot exist the enthusiasm for work which once prevailed. The consequence will be that, if some limit be not put to these, the meeting will lose its scientific character and degenerate into a huge social gathering, very pleasant and enjoyable in its way, but scarcely aspiring to be a scientific meeting, as it has been.

The Sections were thinly attended, and empty benches are not an encouragement to working members to prepare and read papers; while the interchange of views in animated discussions formed a great part of the value of the paper and its after-discussion. The meeting was a pleasant one, and it may be safely said that, of the wealth which has been dug out of the earth in South Wales, a considerable portion has gone down the throats of its owners (who did not grudge the visitors their share), and that, though much of the best coal has been worked out, South Wales is not yet a mere cinder.

J. MILNER FOTHERGILL, M.D.

ROYAT-LES-BAINS, FRANCE,
August, 1885.

YOUR Paris correspondent, taking his holiday, sends some notes from this place, after making a tour among the important mineral-water stations in the central part of France. *Pougues* is the first station (four hours out from Paris) of importance. It is an alkaline water, containing the bicarbonates in less proportion than *Vichy*, which was next visited. *Vichy* is eight hours from Paris, and its waters are so well known that I shall not stop to describe them. The number of visitors increases yearly: this year over thirty thousand people are expected. From *Vichy* to *Royat* is four hours more; or, in a direct train, it is nine hours' express from Paris to *Royat*.

Some experience in the treatment of cases sent to mineral springs enables me to indicate the forms of disease most appropriate for treatment at these stations. Most of the pamphlets which are distributed by the companies farming the waters seem to state that they will cure *especially* everything. Such a state of things is not only confusing, but misleading in practice. It is also a sure method of discrediting that which is really beneficial if properly classified. I believe a large number of our ailments can be modified and often cured by the proper use of the natural mineral waters of France, *used at the springs*, and I am led to wonder, by proved results here, why advantage is not taken of the rich

mineral-water springs in America. I know a number of good springs all over the United States of which but little or no use is made. I remember an iron spring in Fairmount Park which may be of great use, but I am willing to wager something that the medical faculties of Philadelphia don't know anything of its chemical composition.

It is indispensable to study not only the nature of the case, but also the quality of the water and the proper way of using it. If this be scientifically carried out, we can get certain results. It is done here, and thousands of cures are made yearly. Seeing this induces me to raise my voice for some special study of our American mineral waters, so that these important therapeutical agents will be brought more into use in the United States than they have been. How many physicians send patients to springs for serious treatment in America? I am sure very few, except those who have some rich patients who want some amusement at Saratoga and one or two other springs, such as Bedford, etc. Here there are thousands of springs, and some hundreds are of great value.

The law of France is that any one finding a mineral-water spring must declare it to the government, which appoints a *médecin-inspecteur* of the water, to see that its use is regulated. It is then examined, and, if found of use, may be declared of "public utility" by government chemists. Then it is often sold to a company, who farm it; but their charges are watched over by a *médecin-inspecteur*, appointed to reside at the springs.

A description of *Royat* will give an idea of how these waters are used. It is a small town situated in the bed of a charming valley of the Auvergne Mountains, some fourteen hundred feet above the level of the sea, and, like many mineral springs, it is in the midst of extinct volcanoes. The springs were well known to the Romans, as indeed were most of the mineral baths which abound in this part of France, as the discovery of several piscine baths of the Roman epoch attests. It is curious to notice that the Romans knew that air was not so good a conductor as earth, so they surrounded their baths with air-chambers to retain the natural heat of the waters.

The mineral springs here, although of the same type, chloro-alkaline, differ in their mineralization and their temperature, and show a marked difference from the purely alkaline waters of which the *Vichy* waters are a model. *Royat* waters contain the salts of soda, potash, and lithia as alkaline elements, the depressing effects of which are counteracted by the tonifying properties of the salts of iron and arsenic, which, combined with the stimulating effect of the carbonic acid in the waters, render them very powerful and active. One spring, the "*Eugénie*," throws one thousand quarts of water per minute, at 96° F. It is used for drinking,

and also supplies a large bathing establishment. There are no less than eight springs in all. One of them, the "St. Victor," is a strong ferro-arsenical water, containing four and a half milligrammes of arseniate of soda. A new spring has just been opened this week. It was discovered by M. A. Chassan, who is the *régisseur* of the thermal establishment. The qualities of this new spring are strongly arsenical. It is at present being analyzed in Paris, but from a hasty analysis made it is thought to contain fifteen to seventeen milligrammes of arseniate of soda, a quantity that will place Royat above "La Bourboule." This last well-known arsenical water contains too much chloride of sodium, and in this the new Royat water will surpass it. Dr. Boucomont, an eminent physician of great experience, member of the Hydrological Society, is the *médecin-inspecteur* at Royat, the new spring coming under his inspection. After examination of its properties, Dr. Boucomont has named it "Source Fowler." So here we have a natural liq. potass. arsenitis, or Fowler's solution.

Royat waters act strongly on all atonic diseases, such as anæmia, chlorosis, and debility of special organs; but one of their great virtues is their peculiar action on all diseases which spring from a gouty habit. This action they owe to the properties of lithia in the water. In a few words, the principal diseases treated here with success are catarrhs of the respiratory tract and of the various organs; next, gout and rheumatism in all its forms, even when it invades the viscera; then that class of skin-affections called *arthritides*, such as eczema, sycosis, pityriasis, etc. The principal indication for Royat is the probable gouty diathesis; and it is really wonderful how catarrhs of the respiratory tract yield to their action.

Not the least remarkable of the Royat springs is one that contains a proportion of *mineral tar* that is very useful in bronchial troubles. The waters are taken by half-glasses at intervals of twenty minutes, both morning and evening, the number increasing to a maximum of eight and then decreasing to two. Baths and douches are ordered, as well as spray.

THOMAS LINN, M.D.

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

A STATED meeting was held June 3, 1885, the President, Dr. J. M. DA COSTA, in the chair.

Dr. HENRY LEFFMANN read a paper entitled

A PLEA FOR THE MEDICINAL USE OF PURE ALCOHOL AND ALCOHOLIC MIXTURES OF KNOWN COMPOSITION IN PREFERENCE TO ORDINARY FERMENTED LIQUIDS.

I present to the College this evening, with some misgivings, I confess, a topic which can scarcely yet be considered a "live issue" in clinical medicine, but which is destined, I am certain, to become one. At the present time the profession does not take kindly to suggestions having in view material modifications of its policy in reference to alcoholic liquors. The majority of physicians regard those who preach or practise total abstinence, or throw doubt on the indispensability of alcohol as a therapeutic agent, as entitled to little respect or tolerance. In presenting the view that we should abandon in clinical medicine the use of the natural wines and liquors, and resort to mixtures confessedly fictitious, we must expect to encounter all the force of the conservative spirit. Many centuries of constant use have developed in the race a feeling that fermented drinks, particularly those that, like wines and malt liquors, have suffered no modification by distillation or admixture, are bounties of nature wisely given for our use. The traditions of the past associate the first preparation of liquor with the gods, and in all ages poetry and prose have combined to increase the reverence for these natural products. Yet all this feeling is nothing but a superstition. Fermentation is now known to be a process occurring under the influence of micro-organisms, and it allies itself with ordinary putrefaction. The reverence which we have for "nature's laboratory" is born of ignorance, and there is no progress in chemistry more gratifying in its results than that which deals with dispelling the illusions which have surrounded its application to medicine.

Whatever ulterior relations the plan advocated here may have to the questions of total abstinence are not presented for discussion. I merely offer it as a contribution to the methods of exactness and certainty in clinical work.

In the medicinal and dietetic use of fermented liquors it is the effect of the ethyl alcohol which is sought to be obtained. It is true that those who prescribe liquors a great deal are in the habit of saying that the accessory ingredients, compound ethers, astringents, or bitter principles, etc., are also efficacious; but if we closely observe the customs of such prescribers, it will be found not only that the effect expected from the alcohol outweighs that to be obtained from any other ingredient, but also that in the majority of cases the accessory ingredients are either not known or not recognized.

Take this fact, then, as a starting-point, that an agent universally recognized as one of powerful physiological activity should be used only in the most definite condition. The forms of fermented liquors are numerous, and

each form is subject to minor variations, depending on locality and season. The demand exceeds the supply, and hence the strong temptation to dilute and substitute. Within the past few months further notice has been given of the communications by American consuls abroad to the effect that the wines and brandies exported from France and Portugal are fictitious articles in the majority of cases, and it needs but a little inquiry to show that a very large trade in liquors more or less spurious is carried on over the entire world.

Chemical analysis still has much to accomplish in the study of fermented liquors, but enough is known to enable us to imitate their essential features. The tabular statement of composition gives us a long list of mineral ingredients, but we are reasonably certain that, besides the ethyl alcohol, the only ingredients that need attention are the traces of fusel oil, compound ethers, astringent and bitter principles, and the effect even of their accessories is often more on the mind than on the body.

I suggest first, then, that in all cases in which the general physiological effect of ethyl alcohol is desired, it should be given by prescription, in the form of a rectified spirit of standard strength. My friend Dr. A. W. Miller, who is familiar with this topic both from the point of view of the pharmacist and physician, has suggested that such a standard pure spirit be made officinal under the title *spiritus maidis rectificatus*. Such a suggestion is in the interest of clinical accuracy and safety to the patient. If the medical profession have any concern in the protection of the health and morals of the community,—and it would certainly appear that it has great concern,—no better opportunity is offered for good work than in reforming the wide-spread errors in reference to the use of alcoholic liquors. Where is the physician who would say to a patient, "Take a little laudanum or chloral every day," and leave to the patient or the druggist the duty of determining the dose or the duration of the treatment? Yet every day physicians give similar recommendations in regard to liquors. The use of rectified spirits in prescriptions is to be recommended on the same ground that we give potassium bromide and iodide in accurate dosage, instead of the sea-water which contains them, or morphine and quinine instead of opium and Peruvian bark. Incidental to the therapeutic accuracy and moral safety which are involved in such practice, is the not unimportant question of cheapness. Many liquors command prices far above the actual commercial value of the ingredients they contain. A pure French brandy, for instance, costs twelve dollars per gallon. Its place can be taken by a spirit of much less cost.

Several objections may be made to the plan of using the plain spirit. I cannot stop to consider the one which arises from a belief in the superiority of a natural product, from a

view that that which arises from a natural process will be necessarily superior to anything artificial; this, as I have said before, is a superstition; but there are some suggestions which are really important. It may be that the accessory ingredients have some therapeutic value, and it has been said to me that while pure alcohol may easily be used during acute disease and in hospital practice, in long-continued treatment, and as a dietetic, patients cannot be made to take it. In these cases the method to be pursued is plain. Let the alcohol be mixed with suitable accessory ingredients. If a combination of bitter tonic, sedative, and stimulant is wanted, it can be prescribed; and so on. There need be no difficulty in the matter, because modern art in the preparation of fictitious liquors has reached such perfection that excellent imitations of the natural liquors are made, and these have the advantage of definite and known composition and greater cheapness.

It is not uninteresting to note here the general nature of this work. I have the samples to illustrate it. In the preparation of fictitious liquors three methods may be employed:

1. The genuine liquor may be diluted with a suitable strength of pure spirit. This will give us a liquor differing but little from the original.

2. The liquor may be imitated by adding coloring and flavoring ingredients to pure spirit. In many cases this will give a liquor substantially identical with the original.

3. The liquor may be made weak, and the taste and appearance of alcoholic strength be given by means of pepper and bead oil.

The latter method is reprehensible, but the two former methods are, I hold, not injurious, and should be recognized.

DISCUSSION.

Dr. A. W. MILLER said: I have listened with much pleasure to the reading of this paper, for the subject is one in which I have taken considerable interest for a number of years, and I have myself written several papers on it. I doubt whether Dr. Leffmann is entirely correct in speaking of these liquors as being made by art. It is simply following a well-known law of commerce and bringing those products from countries where they are abundant to those countries where they are scarce. In making whiskey we use alcohol produced by fermentation of corn, which is the cheapest article from which it can be made in this country. This is passed through percolators containing charcoal, sometimes animal and sometimes vegetable, which absorbs all the fusel oil and coloring-matters. When this process is carefully performed we have an absolutely pure spirit, which is made of such strength as to contain fifty per cent. of alcohol by volume. To flavor this we import from Germany, where rye whiskey is one of the cheapest forms, the oil of rye, which is

there a waste product in the rectification of rye whiskey. When this is diluted to a proper strength it can be used as a flavoring material.

Brandy is made in nearly the same way. The flavoring material is obtained by distilling with sulphuric acid the refuse of the grapes from which the wine is made. There is only one pound of this obtained from a ton of the so-called mark. When this is properly reduced it may be used as a flavoring ingredient. These are not the only ingredients used in flavoring, but they are all harmless in the small proportions used. Another of these flavors is acetic ether. This is also present in the natural product. The peculiar bouquet of high-priced wines is probably due to the presence of acetates, and to the products of oxidation of fusel oil, producing valerianic acid and subsequently valerianates of ethyl and amyl. These are present in an infinitely small proportion. Artificial rye whiskey contains only one part of amylic alcohol in ten thousand parts; brandy, only one in fifty thousand. In addition to acetic ether there is formic ether in brandy, and also butyric ether. All these things are used by confectioners in flavoring candies, and, so far as I know, no one has suffered from their use, although they are used in larger quantities. There is another point,—namely, that liquor-dealers insist upon having a wholesome article, while many of the confectioners are not so particular.

The cordials which have been shown are made from the rectified spirit, with the addition of aromatics and syrups.

The curaçoa is almost an exact representative of the simple elixir of the Pharmacopœia. This is a very useful manner of administering a mild form of alcoholic beverage, and is to be preferred on account of having the sanction of the Pharmacopœia and on account of having a definite strength. This is another point in favor of the use of artificial liquors. The rectified spirit always contains fifty per cent. of alcohol. The natural liquors vary greatly, sometimes falling to forty per cent., and sometimes, as in rum, reaching seventy-five or eighty per cent.

I might say here that the unpleasant taste of ordinary diluted alcohol is probably due to the amylic alcohol, which is more soluble in strong than in dilute alcohol. Not being thoroughly combined, it causes a disagreeable taste and odor.

The economical value of these substitutes has been referred to. The rectified spirit can be bought for one dollar and twenty-five cents per gallon, and its therapeutic value is equal to that of brandy at ten dollars per gallon.

I have proposed the name *spiritus maidis rectificatus* because it designates the particular kind of grain from which this alcohol is derived, and prevents it from being con-

founded with the *spiritus frumenti*, which is now official.

Dr. JOHN GRAHAM: At the Franklin Reformatory Home some three hundred cases of alcoholism are treated annually. For the last two years none of the ordinary alcoholic drinks have been used, but we have employed rectified spirits variously medicated. In the mild cases alcohol is not used, but in the severe cases it is. The results have been equally as good as when the ordinary liquors have been used. In devising these substitutes for ordinary liquors, we must be careful that we do not injure instead of aid the temperance cause by the introduction of new drinks. In regard to dose, we consider one teaspoonful of rectified spirits to equal two teaspoonfuls of brandy.

Dr. LUDLOW: I would like to ask to what the term oil of cognac is applied? also, whether Dr. Miller has noticed any difference between the so-called California brandy and so-called French brandy? I have tried the California brandy, and it seemed to me as if red pepper had been added to it.

Dr. MILLER: There are different varieties of oil of cognac. The best is that which is obtained by acting with sulphuric acid on the residue of the grapes after pressing out the juice. As I have said, there is only about one pound obtained from a ton of residue. It is a complicated compound of the higher ethers. Some artificial oils of cognac are made by the action of nitric acid on oil of rue, others by the saponification of castor oil or cocoanut oil and the subsequent decomposition of the soap thus formed by sulphuric acid.

As far as my experience goes, California wines and brandies are perfectly pure. Their low price offers no incentive to adulteration. It is well known that brandies from different localities have different flavors. The California brandy also probably never reaches the age of the French brandy.

Dr. WILLIAM HUNT: I have frequently made the observation that in low forms of disease where alcohol is called for, the odor cannot be detected in the breath so long as the patient is not getting too much.

Dr. J. M. DA COSTA presented, for Dr. JOHN GRAHAM, the following paper on

CASES OF POISONING BY CARBONIC OXIDE DUE TO A DEFECTIVE FURNACE-PIPE.

On March 9 I was called to see the following cases of poisoning from the inhalation of carbonic oxide, the poisonous gas being conveyed by the hot-air flue from one of our ordinary cellar-heaters to the sleeping-apartments of the patients. Their history will show how necessary it is to overhaul our heating-apparatus, from chimney-top to ash-pit.

The heater was situated in the middle of a large cellar, had been in use for a number of years, and each autumn had undergone some

repairs. It consisted of the ordinary iron heater, enclosed by brick, forming a hot-air chamber. Inside the air-chamber was a terracotta pipe, running from the heater and penetrating the wall of the chamber, thence to the chimney, to carry off the products of combustion. This pipe was cracked for eighteen inches of its length, the crack being open half an inch; and, unfortunately, the crack was in the air-chamber.

This break is now known to have existed for several years; but up to the time of which I write it had apparently produced no worse effects than annoying the family with a smell from the heater. Something more was needed to change the chronic poisoning into acute. The chimney furnished the addition needed. Like too many of its kind, it had several angles, when it might just as easily have been perpendicular from cellar to roof. It formed part of an outside wall, and the frost had loosened some of the bricks near the top, which, falling down and lodging at one of the bends, partly obstructed it. Complaints came from servants that the heater drew badly, but the cause was never carefully sought for.

Steadily the disintegrating effects of frost and air on brick and mortar continued, until at the time of the accident the chimney was completely blocked. Of course it is highly probable that on the day in question a more than ordinary quantity had fallen, blocking it suddenly; else we should have had our patients complaining of sickness as well as smells, which they did not.

The patients—Mr. R., aged 78 years, Mrs. R., aged 74—went to bed on the evening of March 9, about ten o'clock. Both were in perfect health and good spirits, and the only thing Mrs. R. remembers noticing was that the smell from the heater was a little stronger than usual. Fourteen hours after, the servant, alarmed at their not appearing to her calls, broke in the door and found them unconscious.

When coal is burned with a free supply of air,—which, of course, necessitates an unobstructed chimney,—the chief product is carbon dioxide. When burned with a deficient supply of air, as when the outlet is obstructed, the product is carbonic oxide. The first is poisonous when inhaled in sufficient quantity; three per cent. of the latter has been shown to produce death in animals in thirty-seven minutes. Carbonic oxide is a little lighter than atmospheric air, and when heated ascends rapidly.

In the case of my patients, the obstructed chimney diminished the supply of air to the fire, and the resulting product was carbonic oxide. Its tendency was to ascend. The chimney allowed no exit, so the crack in the terracotta pipe gave out the deadly product, and it ascended by the convenient hot-air flue to the open register in the bedroom,

which, with closed windows, contained its unsuspecting victims.

Carbonic oxide is tasteless and odorless. We cannot recognize it by any of the special senses. The products of ammonia, sulphur, tar, are what make up the odors from burning coal.

When found, Mr. R. was breathing rapidly, with loud bronchial râles, and his skin was dark and congested. Both had vomited some time during the night, and their mouths were covered with frothy mucus. Their extremities were cold; pupils dilated and insensible to light.

Patients were allowed plenty of fresh air. Whiskey was given by the rectum, also hypodermically. Ammonia was given by the mouth whenever they were able to swallow, and warm applications were made to their bodies.

In the case of Mr. R., the labored breathing increased, the blood became more and more carbonized, and he died thirty-six hours after the discovery of the accident, without regaining consciousness. There was no failure in his heart, the pulse being full, but increased in frequency. He evidently died from pulmonary œdema. His chest was dull on percussion, the lungs filled with fine râles. For a few hours before death his temperature rose rapidly, and reached as high as 106°. He had no paralysis.

Mrs. R., when found, was pale and breathing almost imperceptibly. The same means were used in her case to produce reaction, and slowly and gradually the heart's action increased; by degrees the intellectual faculties were aroused, and the patient with much effort was able to inform us that from the time of going to bed until the return of consciousness all was a blank. She had suffered no pain; remembered nothing. Her pulse at this time was 60, small and compressible. Respirations 14; temperature below normal.

She was kept in the horizontal position. Liquid nourishment was given, with small doses of whiskey, and Basham's mixture (3ss four times daily). The brain worked slowly, and she spoke only when roused up, and then dropped back into semi-consciousness. The tongue was coated, and had a slight tendency to dryness; bowels costive; appetite poor.

Her improvement progressed slowly, but at the end of seven days she was able to sit on a chair by the side of the bed. The pulse increased somewhat in volume, but the patient remained drowsy, falling into the same dull condition unless when roused by noise, of which she complained greatly, saying it hurt her head. She also complained of intense pain in her back, running down the legs. At no time in the progress of the case did her urine contain either albumen, sugar, or tube-casts. Her blood was not examined.

Patient continued in about the same condi-

tion for three weeks following the accident, the Basham's mixture having been succeeded by pills of carbonate of iron and the whiskey omitted. Pulse 60 to 70; temperature varying greatly from slight causes, from 98° to 103.5°, but usually normal; anæmia very marked.

On the morning of the twenty-first day following the accident, the patient, while sitting on a chair, was taken very ill. A deadly pallor overspread her countenance, the jaw dropped, the limbs relaxed, and she became unconscious, convulsive twitchings passing through her body. We quickly placed her in the recumbent posture, and, after a hypodermic of whiskey, she slowly opened her eyes and asked, in an excited tone, "What is the matter?"

The supposed cause of the sudden change was that our patient's digestion since commencing the iron had been gradually growing worse, the tongue drier and more coated, the appetite poorer.

I had realized that this digestive trouble was from the iron, but continued it up to this time on account of her profound anæmia. I now reluctantly stopped it, and put her on dilute muriatic acid, ten drops every three hours, with pepsin after food, and enjoined absolute rest in the recumbent posture. The temperature on reaction reached 102°; pulse 120. The pupils were still further dilated; the reasoning power was all gone; she answered questions with difficulty and in monosyllables. The tongue became very dry, and it was almost impossible for her to protrude it. Stools were watery, frequent, and involuntary.

At this time the patient was seen by Dr. J. M. Da Costa, who advised the continuation of the acid, careful nourishment, and keeping the bowels open.

The treatment resulted favorably. In forty-eight hours the tongue regained its moisture, the appetite improved, and the dullness of the mind diminished, though the patient still continued to have delusions and hallucinations, and the memory for certain words (and familiar words) was poor.

On Dr. Da Costa's second visit, on the twenty-sixth day of her illness (April 3), the acid alone having been continued in the mean time, our patient was much better, tongue moist and clean, bowels natural, and, except the anæmic appearance and mental dullness, she was doing well.

We then put our patient on the same diet, milk, beef-tea, mutton-broth, etc., without solids, and, stopping the muriatic acid, gave tinct. ferri chlor., ten drops, liq. potass. arsenitis, five drops, four times daily.

This treatment was continued off and on until April 19, the forty-second day of her sickness, when it was finally abandoned. Its use for a few days was invariably followed by dry tongue, loose bowels, and increased mental disturbance. This was also the case when

we tried the arsenic without the iron. On resuming the muriatic acid, the tongue would regain its moisture, the bowels become regular, and the mind somewhat improved, but the anæmia, as shown by feeble pulse, pale skin, and bloodless conjunctiva, continued.

On April 19 I noticed twitching in her left forearm, which was firmly flexed on the arm, and the hand on the forearm; the mouth was slightly drawn towards the left side. I then stopped the iron and arsenic and returned to the muriatic-acid treatment.

The rigidity of the left arm was followed by partial loss of power in the same, the patient raising it with difficulty, and not being able to grasp with it as firmly as with the right. Her mouth became drawn still farther towards the left: it was, therefore, a case of alternate paralysis. She swallowed with increasing difficulty, and had involuntary movements of urine and fæces. Sensation in the fingers remained good.

Patient remained about the same, except that the bowel-movements decreased in number and the tongue regained its moisture after again substituting muriatic acid for iron and arsenic, until Dr. Da Costa's third visit, on April 26, the forty-ninth day of her illness.

He advised the continuation of the muriatic acid. She also had an application of dry cups to the back of her neck.

The paralysis, which we concluded was probably caused by an effusion near the base of the brain, slowly passed away, but the anæmia was almost as marked as ever.

On May 5 we began the use of ferri phosphas cum ammonio citrate, gr. ii dissolved in ten m. of distilled water, hypodermically, daily; but, as it was followed by some hardening of the cellular tissue and produced disturbance of pulse and temperature, we abandoned the use of the iron hypodermically and gave it by the mouth in two-grain doses morning and evening, also continuing the muriatic acid.

From this time the improvement was progressive. The appetite increased, bowels became regular, the left hand and arm continued to regain their power, the deviation of the mouth to the left steadily diminished, and the patient became interested in her surroundings, and asked and answered questions with increasing intelligence. The pupils gradually diminished in size, and on May 20, seventy-three days after the accident, our patient was sitting up, and four days after was able to walk into an adjoining room.

DISCUSSION.

Dr. J. M. DA COSTA said: In regard to this case, which has been so thoroughly worked out by Dr. Graham, there are several points which strike me as being of special interest.

In the first place, the serious parts of the case came on late. For a time the patient was

apparently doing well, and then in the midst of the affection she is paralyzed with a comparatively rare form of palsy, with paralysis of one side of the face and of the other side of the body. This was preceded by muscular twitchings. The case seemed to be hopeless, but she got over the palsy in ten or twelve days.

Another point was the persistence of anæmia, with all that that implies, including anæmia of the brain. The aphasia, also, was very marked. This was all the more striking, because she was a woman of decided mental force and culture and ready expression. The extreme aphasia which was present for a time was probably due to low nutrition of a portion of the brain from anæmia.

Another point, and one which has been well brought out by Dr. Graham, is in reference to the therapeutics. Until quite late in the case the symptoms were aggravated rather than improved by the use of iron. Improvement always followed the use of muriatic acid, and it is to this and the steady nutrition that her recovery is to be attributed. Late in the case, a form of iron which I have found to be well borne, the phosphate of iron with citrate of ammonium, was well tolerated and well digested; but this may have been due to the fact that the patient had so far convalesced that she could digest iron, whereas previously she could not do so.

Dr. HENRY LEFFMANN: Poisoning from carbonic oxide is essentially different from that by most other gases, in the fact that a compound is formed by the carbonic oxide and the hæmoglobin which is very difficult to break up. The compound formed by carbonic acid and hæmoglobin can easily be broken up by increasing the tension of the free oxygen present in the blood, but the carbonic oxide compound cannot be. The anæmia was due to the modified condition of the hæmoglobin, and not to the absence of iron, and therefore did not yield to the ordinary remedies. An examination of the blood by the micro-spectroscope and a counting of the blood-cells would doubtless have yielded important results.

Dr. J. L. LUDLOW: It may be of interest to mention the cases of two students of the University, who came near being suffocated by coal-gas some years ago. They were attended by Dr. Jackson, who sent to Dr. Hare's laboratory and procured a bag of oxygen. The lives of both were saved.

Dr. FRANK WOODBURY: I would regard both of the cases reported as mixed asphyxia with only partial carbon monoxide poisoning. A case of pure carbon monoxide poisoning is one of sudden death, thus differing materially from carbon dioxide. A cubic inch of carbon oxide is said to be sufficient to destroy life in an adult human being. These cases are interesting from the manner in which they occurred. Cases of acute coal-gas (*i.e.*, gases

resulting from the more or less perfect combustion of coal) poisoning are not very rare. Not long ago I saw a family of five who were nearly asphyxiated by sleeping in a room with the windows closed and a range burning in an adjoining room, the cover of which had accidentally been left off. All these cases readily recovered under the use of diffusible stimulants and oxygen. I could cite other cases, if needed.

Cases of chronic coal-gas poisoning are more frequent than is commonly supposed.* A prominent physician of London—Sir Andrew Clarke, I think—said, in a lecture some years ago, that half of his patients got sick and got well again without his knowing what was the matter: meaning, I suppose, to illustrate the truth of the fact that there are many minor ailments to which no distinctive title can be given. I think it possible that a large number of these slight disturbances of health are due to coal-gas poisoning. They may be transitory, or may extend over a considerable length of time. A gentleman, largely engaged in his office, complained of frequent headaches, drowsiness and a tendency to fall asleep when reading, mental sluggishness, depression of spirits, and of loss of appetite. This continued for some time, and it was feared that there was some grave disorder of the brain; but the special senses were unimpaired, the muscular reactions were good, the dynamometer revealed no loss of power, and the patient when away from his office for a few days enjoyed excellent health, although never robust. It was subsequently discovered that there was an obstruction in the flue of the range in the room below. Owing to the obstruction, the gas penetrated the bricks into the heater which supplied the office and sleeping-rooms, in the manner described by the lecturer of the evening. The only thing which saved the patient from more serious consequences was a hobby for ventilation and the habit which he had of sleeping with open windows. After the obstruction was removed, he soon recovered his usual health.

We have heard a great deal of late about sewer-gas, and the danger of stationary washstands in sleeping-rooms and of drains in cellars. Would it not be well to pay a little more attention to the dangers of coal-gas in our houses, and inquire into the state of the flues from ranges and heaters as possible sources of some of the minor ailments from which we suffer?

AMERICAN DERMATOLOGICAL ASSOCIATION.

THE Ninth Annual Meeting of the American Dermatological Association was held on the 26th, 27th, and 28th of August, at the

* Article upon "The Dangers from Coal-Gas in our Houses," by W. Thornton Parker, M.D., in *Philadelphia Medical Times*, March 21, 1885, page 450.

Indian Harbor Hotel, Greenwich, Connecticut. The meeting was very well attended, nineteen members being present.

After a brief address by the President, Dr. J. E. Graham, of Toronto, read a paper in which he gave the history of a case of extensive ulcerative syphilide in a young girl 16 years of age. When first seen by the reader, the disease had been in existence between four and five years, and had during that time gradually increased. It commenced a little above the right wrist, and extended over the forearm and elbow to the middle third of arm. The ulceration was followed by cicatrization. Another ulcer existed beneath the left clavicle. The patient was put under antisyphilitic treatment: hydrargyrum bichloride and potassium iodide, together with the local application of a mild mercurial ointment. An immediate improvement took place, and in about two months the ulceration had entirely healed.

The case presented the following points of interest:

1. The extensive nature of the disease. It had not been treated for syphilis, and had consequently spread.
2. The ulceration appeared when the patient was twelve years of age. She had not, so far as could be learned, had any early manifestation of syphilis.
3. She inherited the disease from her father, who was known to have had syphilis. Her mother remained quite healthy.
4. The great difficulty in making a diagnosis between syphilis and scrofuloderma, as at first no syphilitic history could be obtained.

Dr. F. B. Greenough, of Boston, read a paper entitled "Clinical Notes on Psoriasis." According to Dr. Greenough's experience, psoriasis occurs in about two and a half per cent. of all skin-diseases. The first outbreak of the disease occurred in a large majority of the cases between the tenth and thirtieth years. In about one-third of the cases heredity seemed to have some influence in determining the disease. Dr. Greenough dwelt quite fully upon the diagnosis of psoriasis, pointing out clearly the characters differentiating it from other diseases which might be confounded with it.

A paper by Dr. S. Sherwell, of Brooklyn, on "A Moot Point in Psoriasis," gave the opinions of a large number of authors upon the relation between psoriasis and the bodily health otherwise of the patients.

Dr. J. N. Hyde, of Chicago, read an elaborate paper upon the "Relations of Lupus Vulgaris to Tuberculosis." While patients suffering with lupus rarely exhibit any other evidences of tuberculosis, Dr. Hyde is of the opinion that the researches of Koch and others show pretty conclusively that lupus is simply a local tuberculosis of the skin, with little tendency to produce general infection.

As bearing upon the same question, Dr. J. C. White, of Boston, read a paper on "The

Treatment of Lupus by Parasitocides." Dr. White, accepting the view that lupus is a form of tuberculosis, has treated it successfully with germicidal agents. The remedies used were bichloride of mercury in the form of ointment (the strength of the application used varies from one-half grain to two grains to the ounce) and salicylic acid. The treatment had, in twelve cases quoted, given much satisfaction. Dr. Hyde proposed a modification of the bichloride application, consisting of two grains of the bichloride to the ounce of compound tincture of benzoin. This forms a closely-adhesive impervious dressing, and gives good results.

Dr. Rohé referred to the successful results of the treatment of lupus with concentrated lactic acid, according to the method of Prof. Mosetig-Moorhof, of Vienna.

Dr. White also presented a report of two cases of "Angioma Pigmentosum et Atrophicum." The patients were brothers, aged 15 and 3 respectively, of Russian-Polish family. In the older patient the affection exhibited in a striking manner its three principal pathological features: an almost universal lenticular melanoderma, large areas of atrophied integument, and a considerable development of telangiectasie. So far as could be judged by a study of these cases, the process is primarily a melasma, the atrophica cutis and new growth of blood-vessels being sequelæ and very subordinate processes in extent. In the child of three years the disease was confined to the face and hands, and was represented only by the melanodermic condition. In neither case was there an apparent beginning of the epitheliomatous change in the skin which so generally forms the last step in this mysterious series of pathological processes.

Dr. Hardaway, of St. Louis, read a paper on the "Electrolytic Treatment of Port-Wine Mark of the Skin." In Dr. Hardaway's hands, electrolysis had given better results in the treatment of this deformity than any other method he had previously tried.

The Committee on Statistics, of which Dr. Hyde is chairman, reported that returns of fourteen thousand and seven cases of skin-disease were received by the committee.

Although probably of little practical importance, since the records are by no means complete, the variations in the various diseases reported from the different cities are curious. Thus, Baltimore reports the largest number of cases of fibroma, scrofuloderma, pediculosis pubis, and ainhum,—"facts certainly pointing," as the chairman of the committee well remarks, "to a large negro attendance upon the clinics." The Philadelphia records excel in the preponderance of keloid. St. Louis reports the largest number of cases of pigmentary nævus; Boston, of the various forms of alopecia and tinea circinata; New York, of sudamen, urticaria, dermatitis traumatica and caloricæ, herpes zoster, acne, tinea tonsurans

and versicolor, impetigo, molluscum epitheliale, callositas, lichen planus, and pediculosis corporis. Chicago furnishes the largest number of lupus vulgaris and erythematosis, hypertrichosis, angioma, carcinoma, pruritus, and syphilis, although in the latter it exceeds the New York report by one merely.

The number of cases of scabies reported was four hundred and forty-two, of which nearly one-half were reported from Boston. Four cases of leprosy were returned, two from New York and two from Chicago. One of the latter occurred in a native of the latter city who had never come in contact, to his knowledge, with a case of leprosy.

Dr. A. R. Robinson, of New York, read an abstract of an elaborate research on "The Histology of the Vegetable Parasitic Diseases." He dwelt particularly upon the anatomical seat of the fungus in favus and ringworm. The paper gave rise to an active discussion, but nothing of importance was elicited beyond the fact that considerable differences of opinion existed among the members as to the relation between the general health of the individual and his liability to attack by the vegetable parasitic diseases, and the influence of the general condition of the system upon the prognosis and treatment of these diseases.

Dr. C. Heitzmann, of New York, gave an account of his investigations upon the "Structure of the Derma and the Development of an Elastic Tissue in it." He stated that Prof. Stricker, of Vienna, had recently acknowledged the accuracy of his (Heitzmann's) observations which were published some years ago in a paper read before this Association.

An interesting case of painful myoma of the skin, with illustrative casts, drawings, and microscopic preparations, was reported by Dr. Hardaway. The case had been diagnosed as one of neuroma, but the microscopic examination showed that the neoplasm consisted of muscular tissue.

Dr. R. B. Morison read notes of a unique case of "Tylosis of the Hands." The patient was a negro fireman with the following history. He had been employed at his present occupation about ten years. His hands were almost constantly exposed to severe friction and a high temperature. Both hands were covered by patches of greatly thickened epithelium. There were likewise ulcerations, which were, however, entirely painless. Portions of the bones of the fingers could be extracted without causing the slightest sensation of pain. The case in this particular was very remarkable.

In the discussion on this case, Dr. Tilden suggested that it bore some resemblance to the affection termed by the French *mal perforant du pied*.

Dr. G. H. Fox, of New York, showed a photograph and related two cases of Dysidrosis.

"The Relation of Herpes Gestationis and certain other Forms of Disease to Dermatitis Herpetiformis" was the title of a paper by Dr. L. A. Duhring, of Philadelphia. Dr. Duhring has for several years paid a great deal of attention to this class of cutaneous inflammations. He believes that a large number of affections described by various authors under different names, as herpes gestationis, impetigo herpetiformis, hydroa, etc., are probably similar in nature. He proposes the name dermatitis herpetiformis for these various affections. He believes that in many of the cases the ultimate cause of the eruption is to be sought in the nervous system.

Dr. G. H. Tilden, of Boston, read a paper, illustrated by photographs and microscopic preparations, on the disease first described under the title "Mycosis Fongoide." Cases have since been described by other authors under various names, but it is generally considered as multiple sarcoma of the skin. Dr. Tilden, however, does not consider the case described by him as sarcoma. The microscopic examination by Dr. Gannett shows that the growths are similar in structure to a lymphatic gland. The case died of exhaustion. No autopsy was obtained.

In the discussion, the general opinion of the members seemed to be in favor of the sarcomatous nature of the affection.

Dr. Le Grand N. Denslow, of St. Paul, read a paper upon "Urethral Irritation as a Source of Certain Neuroses and of Acne." He found in certain cases of acne strictures of large calibre, and promptly cured the acne by dilating or cutting the strictures.

Dr. C. Heitzmann, of New York, made some remarks on "Electrolysis and other Practical Topics." He recommended the Leclanché battery for electrolysis of hairs, on account of its steady action. Six large cells are necessary.

In seborrhœa of the scalp, Dr. Heitzmann has found the crude oleum rusci to give him the best results. He uses it in combination with some fatty preparation. The pomade contains from ten to twenty per cent. of the tar.

In freckles he has used with good effect an ointment composed of white precipitate, 3.75 grammes; magisterium of bismuth, 3.05 grammes; glycerin ointment, 30 grammes. This is applied nightly in a thin layer over the face.

Dr. Robert W. Taylor, of New York, read a paper on "Syphilitic Reinfection." He gave a rapid account of the literature of syphilitic reinfection, and added four cases to those previously reported.

Dr. H. W. Stelwagon, of Philadelphia, read a paper entitled "Observations on the Oleates." The writer regretted the lack of reliable observations concerning the action of the oleate preparations. The paper is limited to the use of oleates in cutaneous diseases. Personal experience, somewhat extended, places

in question their therapeutical importance. The oleates of mercury, lead, zinc, and bismuth, in the writer's judgment, are the only oleates that have proved of service. The oleate of mercury, in the inunction-treatment of syphilis, is not comparable to the blue ointment. In fact, the ready absorbability of the former mercurial preparation is questioned, clinical observation in this respect being in accord with the experiment made by Dr. Brubaker, of Philadelphia, to determine the same question.

The oleate of mercury, in the form of a twenty-five-per-cent. ointment, is especially valuable in the treatment of ringworm of the scalp, and the same, or a somewhat weaker ointment, equally efficacious in tinea sycosis. The writer has found oleate of copper of very little value. The oleate of lead, melted with an equal part or more of lard, forms a soothing and astringent ointment, and an efficient substitute for diachylon ointment. Oleate of zinc in ointment, compared to oxide of zinc, is more astringent and stimulating, but more apt to disagree. As a dusting-powder, the conclusion reached is that it is impracticable, as in the presence of heat and moisture (that of the skin is sufficient) it becomes sticky. The oleate of bismuth, with lard or alone, forms a soothing ointment.

In view of the difficulty of securing good preparations, the disagreeable oleic-acid odor, the costliness, the frequency of unlooked-for irritating effects, and other disadvantages, the writer concludes that the oleate of mercury is the only preparation that promises to hold a permanent value, and even that recedes from the importance of a few years ago.

Dr. Denslow read brief notes of "A Case of Syphilitic Aphasia and Paraplegia followed by Death; with an Account of Autopsy."

The following officers were elected for the ensuing year:

President.—Dr. Edward Wigglesworth.

Vice-Presidents.—Drs. I. E. Atkinson and A. R. Robinson.

Secretary.—Dr. G. H. Tilden.

Treasurer.—Dr. H. W. Stelwagon.

The next meeting will be held at the Indian Harbor Hotel, Greenwich, Connecticut, on the last Wednesday in August, 1886.

G. H. R.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

A STATED meeting was held April 25, 1885, the President, DANIEL LEWIS, M.D., in the chair.

THE COLLECTIVE INVESTIGATION OF THE COMMITTEE ON HYGIENE REGARDING FIBRINOUS PNEUMONIA.

Dr. G. A. SEIBERT made the report, first giving the results of the collective investigation of disease made by himself and other

workers, dating from 1879. The report which he was about to make regarding collective investigation of fibrinous pneumonia instituted by this Society was based upon returns from forty-six practitioners and four hospitals, being all the physicians in New York and Brooklyn who had responded to the invitation sent them to record their observations. The returns showed the exact date of the commencement of the pneumonia, and also whether there was pre-existing catarrh of the respiratory tract. Seven hundred and eighty-eight cases of primary fibrinous pneumonia were reported, being the largest number of cases ever observed anywhere in one city for scientific purposes. The distribution of the cases over the different months of the year was as follows: January, 71; February, 140; March, 103; April, 73; May, 55; June, 37; July, 26; August, 25; September, 53; October, 62; November, 65; December, 78.

Thus we noticed that winter and spring showed the greater number of cases. The same facts were true of a large number of cases of pneumonia occurring during ten and eleven years in the German and Austrian armies and in certain hospitals of Europe. It was evident from charts exhibited that here as well as in Europe by far the larger number of cases of fibrinous pneumonia occurred in the winter and spring, and the least number in the summer. That which was true of pneumonia was likewise true of catarrh of the respiratory tract. The charts exhibited showed, above, the temperature-range for the several months of the year and days of the month, and likewise, below, that of the humidity of the atmosphere, while dots at the foot of the lines showed the days on which the wind had a greater velocity than fifteen miles an hour, and showed its direction. At the top of the lines were red lines, indicating the number of cases of fibrinous pneumonia which occurred on the several days of the month and year. When the temperature was low and the humidity great, the two lines extending across the chart approached each other, and at this time it would be found that the number of red lines at the top of the chart indicating the number of cases of fibrinous pneumonia were markedly increased. There was often also a corresponding velocity of the wind-currents. When the temperature- and humidity-lines were widely separated, the number of cases of fibrinous pneumonia was decreased.

Summing up the results of their investigations, Dr. Seibert said, they found:

1. That the origination of fibrinous pneumonia was greatly favored by certain meteorological conditions, thus explaining the difference in its frequency during the twelve months of the year.

2. Low and falling temperature, high and rising humidity, and high winds were each alone capable of exercising this influence.

3. If all these weather-constituents were found together,—that is, high humidity and cold air or falling temperature, high winds, etc.,—we noticed more cases of pneumonia than when they existed alone.

4. If these three constituents were found together, then there would exist an astonishing number of cases of pneumonia.

5. This frequency of pneumonia would continue so long as these conditions prevailed.

6. The same meteorological influences were found in catarrh, and existing catarrh predisposed to fibrinous pneumonia.

These observations were of a most positive character, but Dr. Seibert would not say that pneumonia was brought on by weather-influences alone.

DISCUSSION.

Dr. A. JACOBI said it had struck him that no remarks were necessary where charts were so eloquent. Dr. Seibert had shown that collective investigation was of the greatest value, at least in the etiology of disease. He trusted the members of the Society would pay particular attention to the form of chart employed, because they would probably be called upon to give the result of their observations for use at the next meeting of the International Medical Congress. It appeared that the author had acted on the good old scientific and empirical plan of medical investigation, for it must be remembered that medicine was an empirical science,—science based upon the close observation of facts. Pathological anatomy and the microscope were not able to supplant empirical knowledge derived, after the manner of the ancients, by observation of disease. At the present time the attempt was being made to find the etiology of all important diseases in the existence of particular bacilli, but in Dr. Jacobi's opinion the truth was to be arrived at only when pathological anatomy, microscopy, the presence of germs, etc., were appealed to in support of clinical observation. Some physicians, in their zealous support of the germ-theory of disease, had claimed that pneumonia, being due to the presence of a particular coccus, could not be excited by what the people called taking a cold: yet persons sitting at an open window of a railway-car, and being struck by a draught, felt chilled, they took a cold, pneumonia developed, and they insisted that the sudden draught was the cause of the disease. Here the people had observed facts, and those physicians who held, on a theoretical basis, that taking cold could not produce pneumonia would be compelled to accommodate their theory to facts, for facts were greater than theory. If we took into consideration the effect of the conditions of the atmosphere—mentioned by the author as being present when the greatest number of cases of pneumonia developed—upon the fourteen square feet of surface of skin covering the human body, we need not be surprised that variations in the state of the weather

should be accompanied by an increased number of cases of pneumonia. The possible effect of a change of weather upon the human body, especially upon the internal organs, was well illustrated in a case under his observation,—that of a man who had hæmoglobinuria on every exposure to inclement weather. The term "taking cold" was a good one, being expressive, and would probably continue to be used.

Dr. A. G. CAILLÉ noticed by the charts that the state of the atmosphere had been observed three times a day. He thought once a day would have been sufficient, and would have involved less work. The author had said that he believed a combination of the weather-constituents alone was not sufficient to cause fibrinous pneumonia. If he meant thereby that there might be other causes, Dr. Caillé said he could agree with him; but if he meant that exposure to cold would never cause fibrinous pneumonia, but only catarrh, he begged to differ from him. He thought it entirely premature to claim that the pneumoniacoccus must always be present before pneumonia could be developed. He moved that a vote of thanks be extended to Dr. Seibert for his valuable work. The motion was adopted.

Dr. L. PUTZEL said that the months during which most cases of fibrinous pneumonia occurred were also the months during which certain other infectious diseases were most prevalent. During the state of weather mentioned, people were likely to be shut up in their houses under conditions most favorable for developing an infectious disease. He thought the testimony of many physicians, based upon clinical investigation, was to the effect that fibrinous pneumonia was an infectious disease. The crisis was such as was not present in inflammation due to the taking of cold. There was no doubt as to the effect mentioned by Dr. Jacobi of cold upon the mucous membranes, but catarrh did not run the clinical course of pneumonia. Statistics should always be taken with a good deal of allowance.

Dr. SEIBERT, in closing the discussion, said he had purposely abstained from theorizing on the facts presented. His belief was, however, that the sole influence of the weather in pneumonia was that of causing hyperæmia, which prepared the ground for the pneumonic poison. In erysipelas, for instance, there always existed previous lesion of the skin.

A MEMOIR OF LOUIS ELSBERG, M.D.,
was then spoken by Dr. C. HEITZMANN.

THE LEHIGH VALLEY MEDICAL ASSOCIATION held its fifth annual meeting at Quakertown, Pennsylvania, August 19. Addresses were delivered by Joseph Thomas, M.D., President of the Association, by Benjamin Lee, M.D., Secretary of the State Board of Health, and by Dr. De Forest Willard, of Philadelphia.

REVIEWS AND BOOK NOTICES.

MODERN THERAPEUTICS: A Compendium of Recent Formulæ and Specific Therapeutical Directions from the Practice of Eminent Contemporary Physicians, American and Foreign. By GEORGE H. NAPHEYS, A.M., M.D., etc. Edited by JOSEPH F. EDWARDS, M.D., and D. G. BRINTON, M.D. Eighth Edition, enlarged and revised. Philadelphia, J. G. Brinton, 1885.

This is not a mere *formularum præceptor*, but presents the art of therapeutics in a different manner from that ordinarily followed by systematic works upon that subject. Modern prescribing is taught by the presentation of carefully-selected models, applicable to the treatment of a large number of morbid conditions; but the scope is wider than this, for the general hygienic and therapeutic methods are discussed in each case, in addition to the magistral formulæ. The popularity of the book is shown by its appearance in its eighth edition.

A PRACTICAL TREATISE ON THE DISEASES OF THE EAR, INCLUDING A SKETCH OF AURAL ANATOMY AND PHYSIOLOGY. By D. B. ST. JOHN ROOSA, M.D., LL.D., etc. Sixth Edition, revised and enlarged. New York, William Wood & Co., 1885. Cloth, 8vo, pp. 718.

The marked appreciation and favor shown by the medical press and the profession to this work on its first appearance, eleven years ago, have been sustained through five editions, and are well merited by the sixth, which shows evidences of thorough revision and of judicious selection of new material. A practical treatise, designed for the advanced student, and for the physician of general practice, as well as for those with special interest in otology, it is written in a style to adapt it to each for frequent reference. Illustrations and illustrative cases are given freely, and add greatly to the interest and usefulness of the work, which is so commonly used as a textbook that further reference is unnecessary beyond this mere announcement of its appearance in a revised and enlarged form.

HAND-BOOK OF DISEASES OF THE SKIN. Edited by H. ZIEMSEN, M.D., Professor of Clinical Medicine in Munich, editor of Ziemssen's "Cyclopædia of the Practice of Medicine." Illustrated with Eighty Wood-Engravings and Color-Prints. New York, William Wood & Co., 1885.

The publication of the American edition of Ziemssen's "Cyclopædia of Medicine" was an enterprise which required the co-operation of the American medical profession in order to make it successful. Messrs. Wood & Co. took the risk of satisfying their subscribers to the translation, and succeeded beyond their

expectations, as the work received cordial support from the profession. Having completed the original task, although the work had largely exceeded the proposed limits, the publishers now have issued a supplementary volume, of large size, handsomely illustrated, embodying the latest information on skin-diseases, and this volume is to be presented gratuitously to the thousands of subscribers to the Cyclopædia. Any subscriber who has failed to receive it should send his address to the publishers.

A GUIDE TO THE DISEASES OF CHILDREN. By JAMES FREDERICK GOODHART, M.D., etc. Revised and edited by LOUIS STARR, M.D. With Formulæ. Philadelphia, P. Blakiston & Co., 1885. Cloth, 12mo, pp. 738.

This is a well-digested, compendious treatise upon the principal diseases of childhood, in forty-eight chapters. The descriptions are clear, and the indications for treatment distinctly stated. With regard to membranous croup and diphtheria, the author gives it as his opinion "that there are grounds sufficient for a belief in the existence of a non-diphtheritic as well as of a diphtheritic membranous laryngitis; but, inasmuch as it is admittedly impossible to distinguish readily and certainly in doubtful cases between the two, and the question of contagion is involved in the decision, it is best to consider all cases as diphtheritic, and to take precautionary measures in accordance with that assumption." The additions of the American editor have been made with discretion, and add to the value of the work.

GLEANINGS FROM EXCHANGES.

INOCULATION OF INTERMITTENT FEVER.—Prof. Gerhardt recently abstracted some blood from a patient while the latter was suffering from a seizure of intermittent fever, and inoculated with this blood two healthy persons. His results are detailed in the *Zeitschrift für Klinische Medizin*. He observed and insists upon the following precautions:

1. The locality in which the inoculation is to be made must be totally free from malaria.
2. The persons whose blood is employed for this purpose must not suffer from syphilis or any other inoculable disease.
3. The persons to be inoculated must agree to the experiment and voluntarily subject themselves to it.
4. The temperature-record of the individuals to be experimented upon must have been carefully kept for some time preceding the experiment, and evince not the least increase of temperature. They must have been at the time of the operation, and for a long time preceding it, utterly free from all febrile symptoms.

The experiments themselves gave the following results:

1. The intermittent fever caused in this manner, by inoculation, is distinguished from the natural malarial fever by greater irregularity of the attacks of the former.

2. After a number of single or groupwise attacks, a regular quotidian, analogous to the form present in the original source, developed itself in the one person on the twelfth day, in the other on the twenty-fifth.

3. The fever thus artificially produced reached in both cases such a high degree (temperature as high as 106° F., and duration of fever fully twenty-four hours) that the experiment had to be interrupted by the administration of quinine.

4. There is no doubt that the pathogenic element of malaria is present in the blood of a patient suffering from intermittent fever at the time of a seizure, and that it is then, together with the blood, inoculable.

5. With very few exceptions, all the seizures by which the inoculated persons were attacked set in at the hour at which the inoculation had been made, or if they had not done so (as was the case a few times) they reached their acme at that time. The period of incubation was difficult to determine: the first febrile movement made its appearance in the one case on the seventh day, in the other on the twelfth, and the graver series of seizures began in the one on the seventeenth day, in the other on the twenty-fifth.—*Indian Medical Gazette*.

REMEDIES FOR SKIN-DISEASES IN THE FORM OF SPRAY.—Dr. Hardaway highly recommends spray as a vehicle in the treatment of affections of the skin. His usual habit is to prescribe a solution of definite strength from which the bottle of an ordinary hand-ball apparatus is filled, and the patient is then directed to throw the fine spray on the parts affected. Any substance that is "sprayable," either in its liquid form (diluted or pure) or in a state of solution, may thus be employed,—e.g., carbolic acid, sulphate of zinc, lotions of *grindelia robusta*, thymol, liq. picis alkalinus, and fluid cosmoline (medicated or not). In the case of the fluid cosmoline, the tube of the atomizer should be large. The spray finds its greatest range of usefulness in diseases affecting large areas and in that class of disorders accompanied by itching and a more or less unbroken cuticle,—viz., pruritus, urticaria, papular eczema, and the like. In generalized pruritus he had had good results from spraying on a lotion of the following sort: carbolic acid, three to four drachms; glycerin, one ounce; and water, a pint. After the bottle of the atomizer had been filled, he sometimes directs the patient to add from five to ten drops of the oil of peppermint. The atomizer-bottle should be thoroughly shaken before the bulb is compressed, in order to diffuse the peppermint through the mixture, as

otherwise it would merely float on top. In many instances the spray is far superior to mopping on lotions with a sponge or rag, being neater and less troublesome, getting the remedy more evenly and uniformly applied over the surface, and usually giving more speedy relief.—*Journal of Cutaneous and Venereal Diseases*, vol. iii. No. 4.

CEREBRAL INFANTILE PARALYSIS.—Dr. Strümpell has well described this somewhat neglected disease in an article of which the following is a condensed abstract. *Poli-encephalitis acuta* occurs usually before the end of the first year,—sometimes, indeed, in the first weeks of life. It begins acutely without any apparent cause, with fever, vomiting, general convulsions, and unconsciousness. These symptoms disappear as quickly as they began, leaving behind them, as a rule, complete paralysis of one-half of the body, which soon, however, in part disappears. The arm and leg usually remain more or less paralyzed, while the facial muscles are restored, though sometimes there is slight strabismus. In other cases the paralysis is a monoplegia, or a sort of ataxia alone is perceptible. There is never any degenerative atrophy of the muscles, though the growth of the affected limb is retarded. The paralyzed limbs are slightly contracted, and there is an exaggerated tendon-reflex. Most of the patients suffer from subsequent epileptic attacks, which may be general or affecting only the paralyzed side. Athetosis is a very frequent accompaniment. In right-sided paralysis the speech is not infrequently affected, and the patients are usually imbecile, though the intelligence may not be weakened. Sensation is unimpaired. The seat of the disease is in the gray cortical substance in the motor region, where in older cases parencephalic lesions are always found. No autopsies have yet been made in the acute stage of the affection. The author remarks on the resemblance to spinal infantile paralysis, and believes that the two affections may be due to the same or similar etiological factors.—*Practitioner*; from *Centralblatt für klinische Medizin*, January 31, 1885.

SALICYLIC ACID AND CASTOR OIL IN PSORIASIS.—Dr. Fox, of New York, showed, at a meeting of the New York Dermatological Society, a girl, 8 years old, who had psoriasis covering all the body. The patient's father and sister also had psoriasis. When she was admitted to the hospital a two-percent. solution of salicylic acid in castor oil was applied to the right arm, a weak solution being used because of the great congestion of the skin. When the patient was shown, the scaling was less, and many of the patches had disappeared, although the disease was extending in other directions. To the left arm the mixture of oxide of zinc and balsam of

Peru had been applied, and there was even less congestion in this situation. In the second case the lower extremities were chiefly affected. This patient was peculiarly susceptible to the action of ammoniated mercurial ointment, even a very small quantity exciting severe dermatitis. Chrysarobin pigment had been applied to the right leg, and a five-per-cent. solution of salicylic acid to the left leg, producing a marked improvement in the condition of the eruption in the latter situation.—*Journal of Cutaneous and Venereal Diseases*, vol. iii. No. 5.

BURIED SUTURES.—Mr. C. B. Keetley describes under this head sutures which are completely covered by the skin and do not involve that structure at all: they are strongly recommended to be used in all operations in which deep structures are involved and where rapid union is required. The use of these sutures enables operations such as excision of the hip to be performed without the use of drainage-tubes in the after-treatment of the wound. The method of applying these deep sutures is thus explained by the author. Suppose an operation to be performed with the object of uniting the two ends of a deep nerve that has been divided. After the ends of the nerve have been united, whatever muscles or aponeuroses had been divided in cutting down upon the nerve would be restored to their original relationships and kept there by aseptic animal sutures; then the wound in the deep fascia must be separately sewn up, and finally the wound in the skin must be closed with catgut, or silver, or whatever is preferred. The results to be expected from this method of procedure are these:

1. There is no need for drainage-tubes.
2. The sutured muscles and aponeuroses are eventually restored as regards function.
3. Deep, rough, and depressed cicatrices are avoided.
4. Necrosis of bone and sloughing of soft tissues are avoided.

The author also states that he has found these sutures very successful in dealing with sebaceous cysts of the head. Having dissected out three from the scalp of a gentleman, the remaining cavities were obliterated by two sutures in each, passing them well through the floor of each small wound. No cutaneous sutures were used at all; the skin-wounds did not gape. A little salicylic acid dissolved in ether, and a little powdered salicylic acid, were placed over the wounds. The patient went about his usual business, and a fortnight afterwards the scab was removed, leaving three round linear cicatrices.—*British Medical Journal*, May 2, 1885.

EFFECTS OF NERVE-STRETCHING ON THE SPINAL CORD.—In the *Archives de Neurologie*, Dr. Pauline Tarnowski reports that, in rabbits, elongation of the sciatic nerve was

followed by serious lesions in the spinal cord. The central canal was distended with plastic exudation, hyperæmia, and extravasation of the gray matter (especially in posterior cornua), proliferation of the nuclei of the neuroglia, increase of connective tissue in the posterior cornu of side operated upon, with disappearance of nerve-tubules. The formation of new connective tissue commenced on the seventh day after stretching the nerve, and in a month there was decided atrophy of the posterior horn of the affected side. The nerve-cells of the anterior horn were less numerous than on the operated side; they were degenerated, and showed signs of vacuolation and actual disappearance. These morbid signs are more common in the lumbar enlargement of the cord.

MISCELLANY.

MISTAKES IN DISPENSING DRUGS.—During last week, two young girls in Hoboken lost their lives by the mistake of an apothecary who carelessly substituted morphine for the quinine ordered; just as in the recent case in Baltimore, in which a child was killed by muriate of morphine, which had been dispensed instead of the corresponding quinine salt. In both cases the mistake was due to the fact that the cardinal rule of prescription-compounding was violated,—the dispenser having his mind distracted by conversation, instead of keeping his whole attention upon his work. The check-system of our best pharmacies, by which a second clerk compares the articles used with the prescription, would have prevented the mistake in both instances, and saved three lives and much suffering. While sympathizing with the druggist, whose remorse made him attempt suicide, we can find no excuse for an accident which could not have occurred had ordinary care been exercised.

The coloring of morphine salts, so as to distinguish them from the cinchona alkaloids, has been proposed, and might prove to be of some advantage; but in careless hands all precautions will occasionally fail.

POISONING BY PETROLEUM.—In the *Gazette des Hôpitaux* for June 16, Dr. Dugué, of the Lariboisière, relates the case of a woman, aged 48, who was brought into that hospital May 8, having just swallowed about a pint of the ordinary petroleum of commerce, with suicidal intentions. She at once felt a strong sensation of oppression along the œsophagus, and especially at the stomach, together with a sense of burning, and was in a very agitated condition. She exhaled a powerful odor of petroleum, and on vomiting being excited by ipecacuanha, with large quantities of milk, a good deal of petroleum floated on the ejections, as it did in those produced from

the bowels by a clyster. All the urine of the patient was carefully preserved, and that passed just before the emetic was given contained a floating layer of petroleum two or three centimetres in thickness. On the next day after her admission the floating petroleum in the urine amounted to twenty-one cubic centimetres, but by the next day had diminished to five centimetres, and then gradually disappeared. Some albumen, which at first was present, disappeared with the petroleum. During the first four days the petroleum enabled the urine to be preserved without undergoing decomposition for ten days. No other feature of interest is recorded.—*London Medical Times.*

LONG ISLAND HOSPITAL COLLEGE.—The announcement of the twenty-seventh annual session, just issued, contains a notice of a prospective change of term, by which the College next year will more fully harmonize its course with those of other American colleges. The term of lectures (otherwise called the Regular term) shall begin in the first week of October of the year 1886, and continue five calendar months, and the term of reading and recitation (otherwise called the Preliminary term) shall begin at the close of the term of lectures (in the spring of 1887), and continue three calendar months.

THE Committee on Arrangements for the International Congress met in New York Sept. 3.

THE MISSISSIPPI VALLEY MEDICAL SOCIETY will meet at Evansville, Indiana, September 8, 9, and 10. The railroads will return those in attendance at one-third fare. Hotel rates, \$1.50 and \$2. For further particulars, address

DR. A. M. OWEN,
Evansville, Indiana.

DANIEL'S (TEXAS) MEDICAL JOURNAL, in its first issue, appeared last month with fifty-seven pages of reading-matter, bound in a sanguinary cover embellished with a star. Editor and Publisher, H. E. Daniel, M.D., Austin, Texas.

NOTES AND QUERIES.

A STRANGE ACCIDENT.

MR. EDITOR,—Strange things happen every day, but none more strange than the incident I give below. It is the case of a boy raped by a large bull-dog.

Benny W., white, aged 10 years, had gone with his elder brother to a neighbor's to gather apples. His brother, having filled his basket, returned to their home. In his absence, little Benny wished to attend to a call of nature. Unbuttoning his pants, they slipped down on his ankles. While in the act of stool the dog mounted him. He could not extricate himself, as his feet were bound and the dog's fore-legs on either side of his body.

When found, he was unconscious, bleeding freely, and the dog still at his work of violence, and unwilling to refrain. For some inches around the patient's anus the tissues were greatly contused and swollen. He improved rapidly, and is now out. The dog was killed.

This is a unique case, but should be a lesson to parents, especially those in charge of female children.

BARTER BROOK, VIRGINIA.

AMMONIA AND ALCOHOL IN SNAKE-BITE.

MR. EDITOR,—In the *Medical Times* of August 22 I notice an article on snake-bite by Dr. B. H. Smith. Living in a mountainous country for the last six years, I have been called on to treat a number of cases of snake-bite. Both rattlesnakes and copperhead-snakes are numerous here. I always resort to the use of whiskey as my sheet-anchor. Sometimes it is ten or twelve hours before I see the patient after the injury.

Two weeks ago I was called on to see a child, aged 10, female. She was bitten by a copperhead on the foot, about one inch above the middle toes. I saw her in four hours from the time she was bitten. Her symptoms then were: extreme prostration, with nausea; respiration very slow; pulse weak; eyes fully dilated, with a wild look. The foot and leg were very much swollen and purple, and very painful.

I gave her sixty minims of spts. ammon. aromat. hypodermically, ordered one ounce of whiskey every two hours, and a large poultice of bruised raw onions to be applied to the foot and to be renewed every hour. The whiskey and onions was kept up until the child was well, which was on the third day.

The above has been my treatment for the last six years, and I have never lost a case; nor have I heard of a death from snake-bite where the treatment has been carried out.

J. B. SHAW, M.D.

DELAWARE WATER-GAP, PENNSYLVANIA,
August, 1885.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES
OF OFFICERS SERVING IN THE MEDICAL
DEPARTMENT U.S. ARMY FROM AUGUST
16, 1885, TO AUGUST 29, 1885.

WOLVERTON, W. D., MAJOR AND SURGEON.—Granted leave of absence for twenty days. (Washington Barracks, District of Columbia.) S. O. 171, Department of the East, August 14, 1885.

CRONKHITE, H. M., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Reno, Indian Territory, and assigned to duty as post-surgeon, Fort Hays, Kansas. S. O. 129, Department of the Missouri, August 26, 1885.

MAUS, L. M., CAPTAIN AND ASSISTANT-SURGEON.—In addition to his other duties, assigned to duty as attending surgeon of the Department Rifle-Camp. S. O. 83, Department of Dakota, August 3, 1885.

POWELL, J. L., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from temporary duty at Fort Leavenworth, Kansas, and assigned to duty as post-surgeon at Fort Lyon, Colorado. S. O. 128, Department of the Missouri, August 25, 1885.

KANE, JOHN J., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect when his services can be spared. S. O. 195, A. G. O., August 26, 1885.

EBERT, R. G., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to temporary duty with United States troops at Riverside Park, New York. S. O. 179, Department of the East, August 24, 1885.

STEPHENSON, WILLIAM, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect September 1, 1885. (Fort Niobrara, Nebraska.) S. O. 79, Department of the Platte, August 20, 1885.

BLACK, C. S., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Upon return of Troops F and L, Third Cavalry, to Fort Davis, Texas, to rejoin his proper station, Fort Clark, Texas. S. O. 98, Department of Texas, August 13, 1885.

MCCAW, W. D., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to temporary duty at the camp of the troops near Kiowa, Kansas. S. O. 128, Department of the Missouri, August 25, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS
OF THE U.S. NAVY FROM AUGUST 16, 1885,
TO AUGUST 29, 1885.

DRENNAN, M. C., SURGEON; SIMON, WILLIAM J., SURGEON.—To temporary duty at Annapolis, Maryland, as members of board for physical examination of candidates for admission to United States Naval Academy.

JONES, WILLIAM H., SURGEON.—Detached from the "Wachusett," and waiting orders.